IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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PERSONALIZED USER MODEL, L.L.P.,

Plaintiff,

v.

GOOGLE, INC.,

Defendant.

: CIVIL ACTION

: NO. 09-525-LPS

- - -

Wilmington, Delaware
Tuesday, January 11, 2011
Claim Construction Hearing

- - -

BEFORE: HONORABLE **LEONARD P. STARK**, U.S.D.C.J.

- - -

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P R O C E E D I N G S

(REPORTER'S NOTE: The following claim construction hearing was held in open court, beginning at 10:08 a.m.)

THE COURT: Good morning, everyone. Let's start by putting your appearances on the record, please.

MS. JACOBS LOUDEN: Good morning, your Honor.

THE COURT: Good morning.

MS. JACOBS LOUDEN: For the plaintiffs, Karen Jacobs Louden and Jeremy Tigan from Morris Nichols Arhst & Tunnell; and I have with me here today Mark Nelson, Jennifer Bennett and Marc Friedman from the firm of SNR Denton; and we also have here with us today Yochai Konig who is one of the inventors and a representative of the plaintiff Personalized User Model.

Thank you, your Honor.

THE COURT: Thank you.

MR. HORWITZ: Good morning, Your Honor.

THE COURT: Good morning.

MR. HORWITZ: Rich Horwitz from Potter Anderson here today for Google; and with me from Quinn Emanuel are David Perlson and Andrea Roberts at counsel table; and then behind the table from Google, in-house counsel, Laura Majerus and John LaBarre.

THE COURT: Well, welcome to all of you. So we're here this morning for the Markman hearing. We assigned both sides 90 minutes. Have you any suggestions as to how we split that time up and actually proceed? Mr. Nelson.

MR. NELSON: Yes, your Honor. The plaintiffs and defendants -- or plaintiff and defendant had talked earlier about proceeding, and I guess if you guys were still in agreement, we were just going to proceed with our affirmative presentation, reserving some time for rebuttal, and then they were going to proceed with their presentation.

THE COURT: Okay. That's fine.

MR. PERLSON: That's fine.

THE COURT: Okay. Then we'll hear first from the plaintiff.

MR. NELSON: Before we start, may we distribute some materials?

THE COURT: That would be helpful, yes. Thank you.

MS. JACOBS LOUDEN: Thank you, your Honor.

(Binders passed forward.)

MR. NELSON: Good morning, your Honor.

THE COURT: Good morning.

MR. NELSON: We're here today to talk about the claim construction of Personalized User Model, LLP or PUM, or "Pum" for short, versus Google.

For the Court's reference, I have the claims, the three dependent claims at issue just on the board there. So if the Court wants to look at the claims in total, the Court may do so. And I may refer to those every once in

awhile.

We have a lot of slides, as you have now seen. What I plan to do is to try to hit the real highlights. I'll probably skip through a lot of the slides. There is some legal stuff in there that is in the briefs. There are some other things in there that are sort of text summaries of the argument, so I'll try to work through it rather quickly, skipping some of the slides.

The presentation is organized into basically seven parts. We've divided the accused groups of terms in order of steps and antecedent basis into sort of seven somewhat related areas, and so the presentation is organized into those seven areas and individual disputes about terms or phrases within those seven areas are contained with that part, so that is how it is organized.

Additionally, it's organized as Phillips teaches. First, we look at the claims. Then we look at the specification. Then we look at prosecution history, if it's available or relevant. Then we look at extrinsic evidence, to the extent that it's dictionaries or treatises at or near the time of the patent. And then, finally, inventor testimony, to the extent it's relevant. We don't think it is, as we said in the brief. We don't have any I don't think in our affirmative presentation but for one slide that doesn't relate to the definition of a term, it relates more

to introducing some concepts.

So with that, I'll go ahead and start. And I'll skip over a couple things here. There are two asserted patents, the '040 and the '276. The title is Automatic, Personalized Online Information and Product Services. Yochai Konig is one of the inventors. He is sitting back here.

The patents identify several objectives which we're going to skip through.

There are 15 asserted claims. As I said earlier, three independent claims that are here, and then independent claim -- dependent claim 34 of the '040 depends from independent claim 32, and so indirectly that one is at issue, too. I don't have a board for that.

Legal principles which of the Court is familiar with, the only one I'll talk about is this one briefly. As in all claim construction cases, claims must be read in view of the specification of which they are a part, but it is improper to read limitations from the spec into the claims.

PUM's position is that its proposed constructions conform to this and follow the first bullet point and don't follow the second and the defendants is just the opposite.

THE COURT: There is a lot of reference to figure 2 of the patent. First of all, the specification is

the same for both patents; correct?

MR. NELSON: Correct, your Honor.

THE COURT: I think it was Google that said in their tutorial that claim 1 of both the '040 and the '276 patents track figure 2. To you agree with that?

MR. NELSON: Not completely, your Honor. Because figure 2 doesn't talk about a search request at all.

THE COURT: Okay.

MR. NELSON: So figure -- may I approach?

THE COURT: Yes.

MR. NELSON: Both the boards of the '276 patent have receiving a search query from the user, step d, retrieving documents based on that query. And step d here, collecting a plurality of documents of interest to a user.

So those are not in '040, claim 1.

THE COURT: And, therefore, they're not in figure 2.

MR. NELSON: They're not in figure 2. Exactly.

THE COURT: But other than that addition on the search query, does figure 2 apply to the '276 patent?

MR. NELSON: Yes, generally I think that is right. Figure 2 is a preferred embodiment, but it would apply to a lot of the activities that are going on in the '276 as well.

And so here is our seven groupings right here, laid out, and I won't read them at this point. I'm going to address the first five; and then my colleague, Jennifer Bennett, is going to address the other two.

So this slide just sets forth what all the disputes are, and on the left side is the relevant claim language here.

And so the first phrase term in dispute -- and I'm on slide 9 -- is: estimating parameters of a user-specific learning machine.

And within that dispute, there are several other disputes. Parameters, what that means; what estimating parameters means; what learning machine means; what user-specific learning machine means; and then what it means, user model specific to a user; what it means to be specific to the user or user specific in the context of the '276 patent; and then ultimately what the user model actually is.

And so the first groupings I want to address are parameters and estimating parameters. But before getting into that, I kind of want to set the stage as to what one of the big overall disputes is. And one of the big overall disputes is -- I'll take my watch off here so I can time. One of the big overall disputes is what it means to be specific to the user.

According to our understanding of defendant Google's position, each user model, each learning machine must be "unique to the user."

Our understanding of what they mean by unique, which I'm not sure that is correct but that's how we interpret it, is that if I have a user model and my colleague Jennifer had a user model, it would be, first of all, unique, the one and only one to us, and its parameters as defendant defines parameters being variables would be unique.

So if you had variables in this context, are you interested in sports, or to the degree that you are interested in cars, they could a binary value or not a binary value. Google says those phrases, if you will, would be the parameters. And so the parameters of my learning machine, of Jennifer's learning machine, of your Honor's learning machine and a million other learning machines would all be unique to an individual person, and they would all have different parameters, different sets of questions.

That is very different from PUM's position. PUM's position is that the claim language requires that the user model in the learning machine be specific to the user, meaning that there is a user model associated with the user but the specificity is given by our definition of the parameters which are the values and weights given to the

variables.

So my learning machine "am I interested in sports" might be a 1. Yes, I am. Jennifer's might be a 0. No, she is not.

Or if you take a non-binary, the degree of interest in cars: Mine might be a .6. Jennifer is a car buff. She might be a .9.

It's those values that are the parameters and it's those values that make the user models specific to the user or the learning machine specific to the user. That is a big overall debate that runs through a lot of these "learning machine" terms.

THE COURT: And under PUM's construction, if two people have precisely the same variables and values, let's just say for now, is that within the scope of the claims or not within the scope? That is, if there happen to be two that are completely identical, are they specific or are they not specific?

MR. NELSON: They would still be specific to the user. And, in fact, the specification, which I will get to if I can get the right slide here, actually teaches that exact embodiment. I'll have to get to it in the order, but the specification talks about two instances where that embodiment is actually taught. The first, when the user models are initialized, a user can wear a hat or a prototype

user. Well, in that case, if they're both being initialized we would have the exact same user model. So even though there are two people that have the same one, it would be specific to us because it's associated with us.

The specification also talks about at any point in time, a user can choose a temporary profile or a temporary hat. And it gives an example of a venture capitalist in Silicon Valley buying a birthday present for his teenage daughter; and, in that example, he chooses the profile, and here it the actual text here on slide 60. He chooses the profile of his or her teenage daughter at this point.

Users can choose profiles on a temporary basis for any session. So any number of users can choose from, in this embodiment, a particular set of predetermined profiles, and if more than one user chose those temporary profiles at the same time, they would have the same user model. It would still be specific to the user, but it wouldn't be "unique to the user" as Google suggests.

THE COURT: Well, what would be a nonspecific profile?

MR. NELSON: A nonspecific profile?

THE COURT: Right.

MR. NELSON: A nonspecific profile would be if you had a situation like a group model, for example, where

you had -- or a clustering, as it's called, where you had a whole group of users together for the purposes of determining the interest in some particular topic. That would be a nonspecific user model. And the patents talk about that as a group model, for example, or a cluster model.

Can you type in slide 17?

So let's talk about parameters real quick here.

We define it as values and weights, as I said. Google defines it as variables. And then the phrase estimating values or weights, we -- or estimating parameters, we describe as estimating values or weights and Google describes that as estimating a value or weight of each of the variables, and then they have this "to calculate a probability" language here on the bottom as well which is disputed.

So slide 17 summarizes the disputes for this area. And then I'll point out for the Court, too, we tried to color the slide so we're talking about the parameters term here in the broader "learning machine" terms and phrases grouping.

And so why are the parameters, weights and values? Well, first, because the claims mandate that they be weights and values, that they're not the variables.

And why do I say that? Well, the claim language

is specific. It talks about estimating parameters.

In the context of estimating, it's a mathematical-type function. Typical meaning of estimate, calculate approximately, rough calculation.

When you estimate parameters, if you are talking about parameters being the variable and the variable being defendant's definition, how much do I like sports, it doesn't make sense to talk about I like it very much or a little bit or a lot or somewhat. It only makes sense that you are estimating the actual parameters if you talk about it in terms of a number.

And so that is the first point with respect to the claim language that indicates that it should be a number, a value, a weight, not a variable as Google suggests.

Secondly, the claims talk about using the parameters to define a user model specific to the user. And they talk about, wherein the probability is estimated by applying the identified properties of the document to the learning machine having the parameters defined by the user model.

And as we'll get to in a minute, a learning machine, in our view, clearly is a function or a model. Well, to make a function or a model specific to actually allow it to calculate something, a probability, for example,

or to define the user, it's got to be the values or the weights. It can't be the variables.

And this is a simplified version of what was in the tutorial. The f of x equals a times x plus b is a template function. By itself, it has, you can't do anything with it to calculate. Google's position would be the a and the b are the parameters.

If that is the case, if this is sort of your generic template learning machine before it's ever instantiated with specific values so it's not user specific, you can't calculate anything with that. You can't estimate probabilities with that. Not until you have the values can you perform those calculations.

And this just gives an example where A is 3 and B is 2. If those are my parameters for the degree I'm interested in sports and the degree I like cars, and now a document X about cars come in, the system can calculate, estimate the degree that I'm interested in that document. If parameters are the variables, it can't do that.

And this is a text from one document or one book at the time of the patents dealing with one particular preferred embodiment of the user model called the multilayer perceptron, and the specification site is here.

While any nonlinear function may be used in a user model (for example, a multilayer perceptron), a key

feature is that the parameters are updated based on actual user reaction.

For the updating of the parameters here, again, it teaches its values are weights. This is the equation from this page of the book. You initialize the values and weights, the parameters of the weights to small random values. You then run the initialized version of the learning machine and you end up with some estimated probability and you calculate the delta for the difference with what you got versus what you expected. You then take the old weight plus the difference and you get the new weight. And that is how the thing updates and it learns.

Again, if these are not values and weights, if they're I'm sort of interested in sports or I like cars a lot, if the parameters aren't the actual values and weights, this doesn't work.

And this is just more examples of the same thing. Starting with an initial guess for value W, the stochastic approximation procedure for the parameter, the weight. Again, that was slide 21.

This is slide 22. This is from Google's reply brief. Parameters take the form of vectors W. Vectors W are weights. Again, semi-parametric regression. Vectors W are weights.

Further, the dependent claims mandate that their

values are weights. This is dependent claim 18 and 49, talking about where the parameters define the user model comprise calculated distances between the user model and user models of users similar to the user.

Again, the calculated distance here, they're values, they're weights, they're not other things.

The specification supports that parameters are -- values are weights.

Parameters must be tunable. They're continually updated. They estimate a probability. This tunability, the ability to be continually updated, their use to estimate, all again support they're values and weights and not variables as Google suggests.

THE COURT: Help me better understand why it's not tunable if I go with Google's construction of parameters.

MR. NELSON: Well, if we go back to the equation that had those four steps, that is really what is describing the tuning. You are taking values or weights of how much I'm interested in sports as a mathematical number. And as the system learns more about me, it changes that number based on what it learns. Maybe I'm more interested in sports than I was last month. Maybe I'm less interested in sports than I was last month. If the parameters aren't the numbers, it can't really work that way. There is nothing for it to actually act on.

THE COURT: Why can't it be changing the variables? The variable was I really like sports a lot and now the variable changes to I don't like it so much.

MR. NELSON: Well, I don't know how that system would work if it was operating on categories or words without actually being numerical values in there. It really couldn't estimate probabilities because ultimately probabilities are estimated mathematically. So if it's trying to operate on words like that, it can't really tune itself because it's just -- it would just be phrasing different combinations of words, and the whole concept here is based in mathematics.

I'm not sure if that answers your question.

THE COURT: Thank you.

MR. NELSON: This is just an example that Google cited in the brief for why parameters are not -- are variables. Well, the indicator variables here in the informative, this is a most preferred embodiment, they're not parameters. They're used to calculate parameters or estimate parameters but they're not parameters.

And this table is, on the next column that isn't cited in the briefing, but this shows how the indicator variables are actually used in this most preferred embodiment, and they go calculate the mutual information between the user and the user's interest in the word Bob,

and those metrics are then used in this table and you end up with a .16. It's the .16 that is the parameters. These indicator variables that are used as part of the estimation aren't parameters themselves and they're not kept. They're just used to calculate to estimate the end product and then they're done. And then it's done.

The last reason here why -- well, first, let's take a look at their definitions, because their definitions themselves of "estimating parameters" and "parameters" are internally inconsistent.

They define parameters as variables here that have a value, but then when they estimate them, you would think you could just plug in the word parameter so it would be estimating a variable having a value or weight, but that's not what they do. They say estimating a value or weight.

And this is -- I apologize there is a typo on the bottom here. It should be "s". (Indicating on bottom of slide 26.)

But if you follow the normal rules of claim construction where if you define a term and then you plug that term into the bigger phrase, the claim should read: estimating variables, having a value or weight ...

That isn't what they do. And, again, this is another evidence that they're being a little inconsistent

here.

So the second part of the parameters definition is whether they're used to calculate a probability. And I won't spend too much time on this, but one test that I often use in these things to determine whether somebody is trying to read in something from the specification, whether it be functional language or some other stuff, is if you take the individual phrase and then you plug that definition of the individual phrase like we just did in the last slide into the bigger picture, and when you take the individual phrase "parameter" here and plug it into the claim language, you start to get, when you get into defendant's construction, a lot of complication.

Plaintiff's construction is, estimating the values or weights of the learning machine, wherein the values or weights define user model ... and it goes on.

Defendant's construction, on the other hand, is, first of all, estimating a value or weight of each of the variables that are used by the learning machine to calculate a probability.

Wherein, now we have rely on variables having a value or weight that are used by the learning machine to calculate a probability, define a user model specific to the user wherein the variables having the value or weight that are used by the learning machine to calculate a probability

or estimate.

That doesn't need to be there. The calculated -- the claim is clear, as we'll show here in 1E, the claim language says, wherein the probability is estimated by applying the identified properties of the document to the learning machine.

Hooking the calculated probability language to the parameters definition, it's just an extraneous limitation they're trying to read in.

So let's talk about learning machines. Learning machines has lots of disputes. I'm only going hit a couple of them in any kind of detail, and the rest of them I'll try to just hit briefly.

The first dispute. We say it's a model or function. The defendant says it's a program.

The second dispute. Defendant said it contains parameters used to calculate a probability. That is from their parameters definition. We say it's used to make a prediction or intelligent decision.

We got criticized heavily for the intelligent decision language. And in preparing for this presentation, I'll get to it, but we can probably live without that language being in there.

Whether it improves or whether it attempts to improve. The dispute here is really -- I'm not really sure

there is one, but to the extent improves means that every time the learning machine runs through that it must get better, we would dispute that.

The goal is that it gets better, and over time it gets better, but on any given iteration of it, where you are calculating -- going back to the first slide, where you are calculating a delta wave, and then you add it to the other wave. Sometimes what the user is doing won't help the learning machine learn more about it. And so the distinction here is whether it must improve every single time or whether it just has to attempt to improve.

And then the last piece here is they propose that it improves over time with the addition of new data or in their most recent brief, monitored user interactions, and we say it attempts to improve based on past observations or experiences.

And the dispute here is really that the monitored user interactions with data, it's better than the new data definition but it still leaves out some important things that the learning machine acts on. And one of those things is a set of documents associated with the user which I will get to.

So let's talk briefly about some of these. The calculate a probability limitation. Again, going back to the example of, are they trying to read in something or not?

This is the definition now of (1)(c) when you apply, or actually it's (1)(e), when you apply the learning machine definition. And it says, wherein the probability is estimated by applying the identified properties of the document to the program that contains parameters used to calculate a probability, and wherein the predictive ability of the program improves over time with the addition of new data.

Okay. A little clunky but not too bad. But, remember, they're using parameters here. Well, parameters has its own baggage associated with it.

So now the claim actually reads, if you follow their construction, wherein the probability is estimated by applying the identified properties of the document to the program that it contains.

And this is the parameters definition: variables having a value or weight that are used by the learning machine to calculate a probability.

This is the rest of the learning machine. Used to calculate a probability and wherein the predictive ability improves over time with the addition of new data having parameters which also calculate a probability.

That is a lot of baggage for claim language that is pretty clear. Wherein the probability is estimated by applying the identified properties of the document to the

learning machine.

The specification also does not support that you have to have this calculated probability language. Learning machine contains tunable parameters again.

It talks about any model that is a learning machine.

I'll skip over a couple of these legal slides here.

The model or function language. The specification is clear. A learning machine may be a model. While a specific embodiment of the learning machine is discussed below, it is to be understood that any model that is a learning machine is within the scope of the present invention.

It is clear, learning machine can be a model.

Learning machine can be a function.

The user model, with its associated representations, is an implementation of a learning machine.

The user model is a function. A learning machine can be a function.

Nowhere in any of the asserted claims except for dependent claim 32 -- or independent claim 32 of the '040 patent is the word "program" ever used. It's the only place it appears. There is no rhyme or reason why it should be, why learning machine should be limited to a program in any

of these claims.

And, in fact, the use of the word program in some claims strongly suggests that it shouldn't be limited to programs in other claims. I think that is Liebel-Flarsheim, among other cases.

So the new data versus monitored user interactions, I'll go over this just quickly. This is the Google brief where they offered to compromise.

The problem with that is it reads out, first of all, a set of documents associated with the user. And the reason it reads that out is because it's clear from the claim here. And this is claim element B of the '040 -- claim 1 of the '040 patent. The updated user-specific data file, or -- the estimated parameter of the learning machine wherein the parameters define the user model specific to the user, and wherein the parameters are estimated in part from the user-specific data files.

So what this teaches is that the parameters and the learning machine, it must be estimated in part from the user-specific data files. Okay?

Well, what are the user-specific data files? Well, they are the monitored user interactions with data. That's what Google suggests; and we're fine with that part of it; but they're also a set of documents associated with the user. The monitored user interactions wouldn't

encompass that.

Nor would the monitored user interactions definition encompass world knowledge, which also can be built into the user model, which I will talk about in connection with another element shortly or other uses such as cluster data that the user model uses in some circumstances.

So for that reason, although we think monitored user interactions is better, it still is too narrow. We think our past observations and experiences language better capture that.

Attempts to improve versus improve, we talked about that. The specification talks about optimizing, again, suggesting, you know, attempts to improve as opposed it must improve every time.

The intelligent decision language, we talked about that. And in looking up the definition of predict, we just decided that the prediction was enough even though other sources define learning in the context of intelligent decisions as well.

So unique versus specific. That, we talked about earlier. What does it mean to be unique versus specific? Well, this is the user-specific learning machine that we kind of had up before. I got a little bit ahead of myself.

So the "user-specific learning machine" is the next term or phrase at issue. What is really at issue there, we talked about what a learning machine actually is. So the definitions here, their definition is it must be a learning machine unique to the user. Ours is our same definition of learning machine but it must be based on past observations or experience specific to the user. And just to adopt Google's shorthand version here, learning machine specific to the user. So this is -- the debate here is the unique versus specific, and we'll discuss this in connection with the user model.

And so the definition of a user model -- and this is on slide 53 -- is an implementation of a learning machine updated in part from data specific to the user. That comes out of the claim language.

Google's definition is a model unique to the user, that is created and updated by the learning machine and stored in a data structure.

So the three disputes: specific versus unique, whether it's an implementation of a learning machine or created and updated by a learning machine, and then whether it's stored in a data structure.

We talked about the present invention stuff a lot in the briefs so I'll skip over that.

The claim -- well, so we start with the claims.

Well, the claim language talks about specific. User specific, user model specific. It doesn't say unique. Nowhere in the claims is the word unique ever used. Strong evidence that specific shouldn't be unique.

The specification repeatedly indicates that the preferred embodiment Personal Web is associated with the user, represents the user, but it doesn't ever say that it is unique to the user:

Personal Web stores for each user a user model.

User model represents the user's information and product interests.

Stores parameters that define the user.

Talks about individual user model for user u may be applied to a cluster of users.

Again, there is nothing there that says it has to be unique to the user. We talked about this at the start, the hats. The specification with the hats teaches specifically that two users can have the same user model at any given point in time, whether on initialization, whether they're wearing a temporary prototype or temporary profile hat or, I suppose, if two people wanted to run the exact same searches, from the same place, they might end up with the same profile in such an extreme example. But the specification clearly shows that these user models in this context are not unique, meaning the one and only and unlike

anybody else all the time.

In fact, the specification uses unique only once in the entire specification. And it uses it in this context: The user model represents the user interest in a document independent of any specific user information need. This estimation is unique to each user. In strict mathematical terms, given a user u and a document d, the user model estimates the probability.

And so even the usage of unique here is talking about, well, it's making a probability estimate for a user model unique to a user model, not necessarily that it might not be the same estimation if both people are wearing a temporary hat, for example, or a temporary profile. That is the only time the specification uses unique; and, in our view, that does not mean that the user model itself must be individualized and unique and unlike any other model as opposed to associated with.

Now, in reality, in our patent most of the models would probably be unique because the parameters which define the user model and the user specific learning machine would be likely quite different for each individual. They just don't have to be.

And this is some general dictionary definitions:

Specific: having a fixed relationship to; restricted by nature; explicitly set forth; definite;

relating to, characterizing, or distinguishing.

Right here is likely where Google is going to rely on the unique language, special, distinctive or unique. I don't think that means in the context of this general dictionary that specific equals unique like they say in this context.

Definition of specific: being the one and only. I'm sorry. Definition of unique: Being the one and only. 2: being without a like or equal.

Again, reading the entire specification in the claim language, we certainly believe that it's clear that the unique language that Google is seeking is not the proper construction here. The claim language uses the word "specific" and that is how it should be construed.

And implementation of a learning machine versus a learning machine or versus created by a learning machine. This is a little piece of the animation from the tutorial. What is intended to be represented here is this is the user specific data files for this user AB15Z3DI-JS.

While the specification shows the learning machine user model here, the user model specific to the user comes in part from this, these user specific data files which are up here. And so here we see the more complicated function from the tutorial that is the user model here, specific to the user because there is the parameters, these

values, and so when this things defines a user model, it's not defined by the learning machine, it's obtained by, at least in part, the user specific data files. And there you see them kind of dumping into the funnel whatever the calculations that are done to then update the parameters of the user-specific learning machine or of the user model specific to the user. New parameters, new values. New values here, new parameters. And, again, that demonstrates in our view that the updating -- the user model is not -- the updating is not being done by the learning machine which is what Google suggests.

And the specification also teaches that the user model, with its associated representations, is an implementation of a learning machine. And the specification -- I'll go through the next set of slides 67 through about 71. But you mentioned 72 earlier, and all the text describing figure 2 and that embodiment talks about the user model being the thing that estimates the probabilities, and that is the learning machine in the claims.

First, it's initialized. Then it's updating the parameters. That is what we just saw with the slide with the funnel.

Finally, Personal Web 12 applies the user model, to unseen documents, which are first analyzed in step 36, to determine the user's interest in the document, based on step

38.

That is the analyzing block of figure 2 which is sending the documents to the user model specific to the user to estimate a probability.

The user model represents the user interest in the document independent of information need.

We talked about this estimation is unique to each user. In strict mathematical terms, given a user u and a document d, the user model estimates the probability P(u/d).

If a user model is not an implementation of a learning machine specific to the user, that functionality just doesn't really work. So this is another reason why PUM's definition should be adopted.

And this is figure 2, just kind of go through the steps that we talked about.

I'm going to skip over. This is what Google will likely rely on as a counterargument and if we have to address this in rebuttal, we will.

So it's stored in a data structure. The specification doesn't require how this thing is stored. It may be stored in a data structure. We don't dispute that. Specification says it's a function that may be implemented with any desired data structure, and that is not tied to any specific structure or representation.

"Or representation" language here suggests other types of representations, but even if you read it as Google suggests, this is still one preferred embodiment, and the claim shouldn't be limited to that preferred embodiment based on, you know, there is no disclaimers here that it must be a data structure. There is nothing to rely on the defendants or the plaintiff has done, I should say, to limit the storage mechanism here. This is just an attempt to read something in, how the thing is stored as opposed to what it is and should be rejected.

So let's talk briefly about user and user-specific data files in particular.

User is used throughout the claims. The definitions of the parties, the first part we're in agreement on. The second part is where the dispute arises. The person here in an electronic system isn't inside the computer. They're represented by something. And we call that something an electronic tag or identifier. We could have called it a cookie, too, or other things, but someone of ordinary skill in the art in 1999 would understand that in an electronic system, a person isn't in there, they're represented by some electronic identifier to the system and that is all our definition is trying to suggest here.

And we start out, the claims refer to the user u in a couple different places. And the user u is defined as

the user and his or her associated representation are denoted with u. In our view, user u there, which defendant's antecedent basis argument argues is the same as user, includes the identifier.

THE COURT: Well, they argue that that language actually undercuts you because it distinguishes between user and the associated representation. Therefore, the user isn't the associated representation.

MR. NELSON: Yes. I can understand that point of view, but I don't think that point of view is correct. It says the user and the associated representation, meaning that it's the user u here is both.

THE COURT: So then what about if we construed it as this user is a user or the associated representation? That is, it's a person sometimes and other times it's an associated representation.

MR. NELSON: I think that would be fine, as long as the associated representation language is in there. Because what we expect they're trying to do and what we learned from their deposition testimony is that they're going to take a position that they don't personalize to a user, they personalize to a cookie. And, you know, I don't know the last time a cookie had a credit card to buy something from an ad, for example, but that is why this is a valuable thing for them. So if you construe this as the

user is a person or a tag or an identifier, the plaintiff is fine with that.

THE COURT: Now, not only are you fine with it, isn't that a fairer reading of this patent because your patent talks about users writing e-mail, reading e-mail, playing games; you know, when was the last time a computer wrote an e-mail all on its own?

MR. NELSON: I'm not sure I can answer that if it was in 1999 or not. But I see your point, your Honor. And I guess that even in the context that you just gave, the user writing e-mail, what is seen inside the computer isn't the person writing the e-mail, it's some electronic identifier associated with the person that is sending the e-mail out and is recognized on the other end as this person's electronic ID, and the system then translates that into a person's ID.

So I think either definition, PUM's definition or the alternate definition you proposed is an accurate way to describe this.

And this is a document just from Google that I put up there just to show that even Google agrees that one of ordinary skill in the art understands that users are electronic identifiers.

User-Based Ads Quality. The user is defined as a prefid or pref-ID cookie.

So let's talk about user specific data files.

May I ask how much time I have left?

THE COURT: You started at 10 after 10:00, so ...

MR. NELSON: So I'd better hurry.

User specific data files. This is, the dispute here is data files. Whether they're files and whether they must be unique. We already talked about unique, so let's talk about files.

Well, the claim specifically defines what user specific data files are. It says the user specific data files -- and I'm on slide 91 here -- they comprise the monitored user interactions with the data and a set of documents associated with the user.

This is a recent Federal Circuit case, and you can take this holding and you could put in our claim language and it's verbatim:

The "controlling language could hardly be clearer", where the claim recites "a user-specific data files comprising the monitored user interactions with data and a set of documents associated with user." The claim language is unambiguously defined as what comes after the comprising.

That's the end of the inquiry, your Honor, as far as we're concerned.

THE COURT: Does comprising always constitute a definitional term? You know, whenever a patentee uses comprising in a specification, they're being their own lexicographer?

MR. NELSON: I wouldn't say always, but I think where it's used specific in claim language like this, it does.

And there are other cases cited in our brief as well that show that the courts, when the word comprising is used as part of a claim element internally, and it says element X comprises elements Y and Z, that that is definitional language.

And the specification is consistent with that. It talks about a set of documents; and here it uses end products associated with the user as well, being that comprising is open-ended. So it defines at least -- well, the claim in this case tells exactly what it is. The specification contemplates that it could be more but it is at least what the claim says it is.

Now I'm going to just talk about this real briefly and then I will skip over to the next element.

The dispute here on monitored user interactions with data, we don't quite understand what defendant is going to contend they are. The collected information piece that we have here is in there to get the idea that what is going

on here is the user is out there and doing stuff on the web, and that there is information, there is data that is collected, and that data is then what goes into the table like you saw above the funnel. That is data. That is collected information.

And so what we want to be clear is that what is going on is that the data is collected. It's not you've just got the monitored user interactions with data. What the monitor user interactions mean here is the collected information about what the user did in step A, the transparently monitoring step, is generating data, and what those, what that data is, is the monitored user interactions. That is really where the dispute arises. And we think that is clear from the claims.

Set of documents associated with the user. The only dispute here is document. This is both parties definition of document and so I'll just skip to that.

So document, text or any type of media versus any type of electronic file.

The real dispute here is whether or not the document storage mechanism in Google's case, whether the document should be defined by how it is stored, basically. Google says it's an electronic file. We agree it's electronic. It's an electronic system. But it doesn't have to be a file.

In 1999, it was well known that you could have dynamically generated web pages, dynamically generated search results. Their file definition would rule that out, and that is what we think is wrong.

The spec defines it as not just text but any type of media. It doesn't say that it has to be files.

THE COURT: Does it include always lexicographer language when I see it in a patent?

MR. NELSON: Not necessarily. I would say this is strong evidence that the term "document" should be construed to be text or any kind of media, at least. And that is the position we took in the brief. It doesn't say, per se, the document is. I'll agree with that. But I think, looking at the remainder of the specification, it's clear that the document shouldn't be confined to how it is stored.

The first evidence of that is that the user in the initialization phase may supply documents not included in browser files. They may not be files.

But, more importantly, in other aspects here, it talks about search results that are visited following a search query, websites that the user visits independently as being examples of positive interactions with documents here.

Well, search results that are viewed in websites, at this time it was well understood that you could

dynamically generate these types of activities, and that is what the dispute here is really about. We think that the fact that these things are included in here would be enough to teach one of ordinary skill in the art, and one of ordinary skill in the art would understand that the term "document" here encompasses more than stored files.

And this is another cite from the specification on slide 109, talking about sending the user model to third-party websites, which then evaluate their dynamic content, like cnn.com, for example. They very often are changing content against the user model to decide whether to push information back to the user based on personalization, and those types of systems operate on dynamically generated information.

I'll skip over this. This is just the figure that they cite. This talks about how documents are parsed. It doesn't say they must be stored as files.

Unseen document, I want to spend a little more time on. The dispute here is whether an unseen document must be seen by -- must be unseen by the user or must be unseen by anybody ever. And the specification is clear that the unseen document here needs only to be unseen by the user, and it doesn't need to be unseen by everybody.

The claim language starts making that clear right from the front. It talks about a user. It doesn't

talk about this claim being applied to multiple users here, the documents that are unseen here; thus, the whole claim is in the context of a user.

The claim 7 talks specifically about, wherein the identified properties of the document d comprise a user independent property selected from the group consisting of. And then I, J and K of slide 116 here all talk about other users having seen the document d.

Now it's interesting because defendants antecedent basis argument again suggests that document d is the same document, no matter what. Well, in this case, an unseen document would definitely be seen by other users and their definition can't be right.

The specification contemplates also, I talked about world knowledge earlier. That world knowledge is incorporated into the user model.

Well, what is world knowledge? Well, it's a lot of things but one things it includes is the number of users who have accessed the document, whether they saved it to a favorites list, whether they previously have been interested in the document, all of which tells you they've seen it before.

Again, it's unseen by the user, not by anybody.

The specification language also talks about unseen documents in the context of the user, it's single,

not everybody.

I want to talk briefly about -- I mean the argument that defendants really make here is that somehow in addressing the Gerace reference in the prosecution history that PUM has disclaimed the idea that the document must be unseen by the user and somehow it must somehow disclaim it so it requires, the only possible construction is the document must have been unseen by any user, and that isn't, that isn't at all what Gerace was about.

May I approach the board here real quickly?

THE COURT: You may.

MR. NELSON: So what the Gerace system was, was the Gerace system was a system that identified the user interest in a fixed set of categories by finding similar users among the existing set of users within those types of categories.

So you had a group of other people, let's take the example, that are Philadelphia Eagles fans. That is your category. And that group is shown a bunch of ads, and those ads are given scores; and for other users that would fit into the Philadelphia Eagles interest category, the system in Gerace knows we're going to serve these ads out to this Philadelphia Eagles user because all the other users that are Philadelphia Eagles fans, they like these ads, too.

Well, in Gerace, it makes sense that an ad that

had never been seen or only had been seen by a couple of people, really, there wasn't enough data on it to make a prediction because the group of users that were the Philadelphia Eagles fans, the category of people that were Philadelphia fans here, they wouldn't have enough data for Gerace to make the prediction. So the predictions in Gerace are based on other people's views, other people's interests that the system deemed were similar to the users.

The system in this patent is completely different. The system in this patent is based on the information learned about the user and herself.

And so the user doesn't care whether anybody else has seen the document, or whether they have. The user cares about -- the system cares about what this user and whether this user would be interested in the document. It's really an apples-and-oranges system.

And so the language here is talking about: In other words, it is not taught, nor is it suggested how the first set of users or the first user is presented with an unseen document or an unseen ad in Gerace.

It's apples an oranges because the system here can deal with that. That is what the whole thing is about. It's about learning about the person in the form of the specific learning machine, or the specific user model. Gerace doesn't deal with that issue so it's different, as

the applicant suggested.

But there is no disclaimer here or anything else that would limit the meaning of unseen document to a document that had not been seen by anybody. And that is why in the briefs, your Honor, we said that all the cases they cite, they weren't even applicable.

THE COURT: Well, I think are saying this but try to help me understand it this way. Under your construction of unseen document, how is your invention and improvement over Gerace of what was in the prior art?

MR. NELSON: Well, our invention is -- one way that it is improvement over what was in the Gerace and what was in the prior art is our invention was built upon what the system learns about the individual. And so the user model is specific to the user having the parameters, as I said earlier, that are my values. How interested am I in the Philadelphia Eagles? The Gerace system doesn't care how interested I am in the Philadelphia Eagles. All it cares about is whether I fit into a predefined category and what ads other users that fit into that predefined category like. That's it.

And so our system is a great improvement over Gerace because it models on what our users actually -- what it learns about our users. So our system, it can deal with a document not seen by anybody, it can deal with a document

not seen by one person, it can deal with a document seen by a hundred million people. The unseen document is just unseen with respect to us.

All right. We'll go through the "probability" terms real quickly here. The degree of belief or likelihood versus percentage chance is what the dispute is.

To really put this dispute into context, you need to sort of understand the two approaches to probability. There is a Bayesian approach, which it's undisputed the patents are about and a frequentist approach. And this is Mr. Konig's testimony where he talks about the frequentist approach here and the Bayesian approach, and that is on slide 128.

The patents clearly are the frequentist approach. Nobody disputes that. And for the specification, on the frequentist approach, it's also estimating a probability which suggests less preciseness than a percentage chance to begin with.

But if you look at the applicable text, again, specification talks about estimating probabilities, which is consistent with Bayesian versus calculating, which is another dispute that I will skip over. Looking at statistics most of the time, learning machines and Bayesian statistics express probabilities as beliefs, as likelihoods, as approximations.

You then want to find a way of expressing your beliefs about data, taking into account both your prior beliefs and the data ... but it will turn out that if we can collect enough data, then our posterior beliefs will usually become very close.

The Role of the Learning Machine.

The problem encountered by the learning machine is to select a function from a set of functions that best approximates the system's response.

The quality of the approximation produced by the learning machine is measured by the loss or discrepancy between the output produced at a given point X. That is kind of going back to the figure with the equation, the three pieces pulled out before.

Again, this talks about approximations, about estimations, not strict percentage chances that are frequentist approaches. Tellingly, the specification -- neither the specification nor the claims ever uses the term percentage chance. And although the claim, the specification does talk about calculating and estimating probabilities, for the most part the specification uses estimating and the claims consistently, and only, use estimating.

Some general dictionary definitions. And this is the one point I want to make here because this likely

what the defendants will rely on, what they relied on in their briefs.

General dictionaries here support our meaning, but they also do support defendant's meaning. And it talks about in both the statistics and the math context here in a general dictionary being the frequentist approach, the percentage approach. But what I tried to show here is that this is complicated stuff and a general dictionary for the purposes here just doesn't cut it like a book about actually learning machines and data.

The ones that talk about learning machines and data specifically speak about probabilities in the context of likelihoods or beliefs which is more consistent with our definition -- which is consistent with our definition.

And this is just a slide about the frequentist approach and what it's generally applicable to: coin flips, dice, things that you have long runs that you can basically estimate odds for, not for how interested are you in the Philadelphia Eagles versus how interested am I in the Philadelphia Eagles.

Approximating or roughly calculating. We'll skip through that.

Posterior probability. The definition here, the dispute here is they really have a new knowledge piece. We dispute that. The claim language is clear. I'll skip

through that as well other than just point to the specification and say here, posterior probability is mentioned specifically.

Last piece I want to address here is indefiniteness. There are two, three phrases they claim are indefinite. The one I want to focus is on documents of interest to the user, and documents not of interest to the user.

The legal standard is very high.

The defendants presented no declarations or anything that says someone of skill in the art can't figure this out.

I want to address their argument really head on because their argument is based on the Datamize case. And, Datamize, as your Honor might remember, the phrase was "aesthetically and the District Court found that phrase indefinite, and the Federal Circuit upheld that. And the reason the District Court found that indefinite and the Federal Circuit upheld it was because the specification didn't provide any guidance whatsoever as to what aesthetically pleasing actually was.

The invention in Datamize was a kiosk that you designed sort of the interface to, and there was a requirement that that interface be aesthetically pleasing.

So the specification -- this is slide 153.

This is a portion of the patent in suit in Datamize. The specification doesn't provide much guidance as to how to interpret what aesthetically pleasing is or not. It just says, well, you do it by taking into account the considered opinions of aesthetic design specialists, database specialists, academic studies on public access kiosk systems, user preferences and some other stuff. There isn't a lot of guidance there that somebody designing a system could objectively look at and find out what is aesthetically pleasing and what isn't.

Our situation is completely different. The specification does provide objective guidance here as to what is or is not a document of interest to the user. Specifically, the specification says, search results that are visited following a search are documents of interest. Documents saved in the user favorites or bookmarks. Websites that the user visits independently of search queries.

Negative examples are documents that are not of interest, search results that are ignored although they appear at the top of the search result, deleted bookmarks, and ignored pushed news, for example. All of those are objective measures that one of ordinary skill in the art or would teach one of ordinary skill in the art what was or was not of interest to the user according to this system.

The specification doesn't stop there. It talks about degrees of interest. And in looking at the interaction type -- oops -- looking at the degree of interest, whether it was positive or negative. For example, whether it was saved in the bookmarks file. How long the user spent viewing it. Whether the user followed links in the document.

Again, these are objective measures. In 1999, there was certainly data out there that said, well, if a click is this amount of time, it's a good click. If it's less than that amount of time, it's a bad click. How many bookmarks? Did they bookmark it? Did they follow links?

All these are objective things that someone of ordinary skill in the art would look at and say, okay, I know what is of interest or what is not of interested based on the guidance.

THE COURT: If the claim term were interesting as opposed to of interest to the user, do you think that might be subjective and, therefore, ambiguous?

MR. NELSON: I think it could be. I mean I think certainly what our view is what they're trying to do is they're trying to read this subjectivity into the claim, and the system here is designed, as computer systems must be, to operate in an objective fashion. It lists objective measures of what would be of interest. If it did require

this must be interesting to the user, that is probably a little bit closer call because what is interesting to the user might read the users into it a little bit more, but I think still there is enough guidance here as to what would be interesting or what would not be interesting to the user based on the objective metrics that are in the specification.

And the specification doesn't stop there either. It provides a method and teaches that you can have any grade between 0 and 1. Another example of something that would be of interest, a website that the user accesses at a frequency greater than a predetermined threshold.

All of these things would teach someone of skill in the art what it actually means to be of interest or not of interest to the user. And for those reasons, we think that this claim should not be found indefinite in any way, shape or form.

THE COURT: Is that a legal issue I need to reach now on Markman?

MR. NELSON: In our briefs, your Honor, we took the position that it wasn't really a legal issue that you needed to reach now. We think if you want to rule that it is definite, we certainly wouldn't object to that, but if your Honor wants to hold that open until a later time, you know, that is obviously your Honor's decision.

And this is the Vikase case that I cited in the

briefs. That is somewhat analogous. The term there was no measurable losses, and the losses included loss of taste and flavor, and the District Court in the Northern District of Illinois included there might be some subjective aspects to that but the claim was sufficiently definite.

And the last term here is, user interest or information derived from the user model. Other than to argue the claim is indefinite, the defendants presented no evidence on this at all.

The specification here on slide 162 talks about it a little bit. There is just no basis at all for holding this phrase indefinite. It's clear on the claim language what it means, and there is nothing in the briefs that have been offered otherwise.

And with that, I will turn it over to my colleague, Jennifer Bennett.

THE COURT: That's fine.

MR. NELSON: Thank you, your Honor.

MS. BENNETT: Good morning, your Honor. I'm Jennifer Bennett, counsel for plaintiff, Personalized User Model. I'm going to walk you through the presenting order of steps and antecedent basis disputes.

First, I will again the presenting dispute.

The terms "to present" or "presenting" are found in claims 1, 21, 23 and 24 of the '276 patent. Note they

are not found anywhere in the '040 patent.

Plaintiff's proposed construction of present or presenting is to provide or make available or presenting or making available, whereas defendant's proposed construction of the terms present/presenting is to display or displaying.

If Google is successful with its construction of presenting as displaying, presenting could be interpreted to be done on the user side, and defendant might try to argue this creates a joint infringement argument. The specification is clear, however, that presenting is done on the server side.

To illustrate the dispute, let's consider the example of a user entering a search query. Upon receipt of the search query by the system, the system could present or make available potentially thousands or even more search results but only a subset of these results, for example, 10, might actually be displayed or shown to the user on his or her browser.

As I will explain, the primary dispute here is basically whether presenting means displaying.

Defendant's proposed construction should be rejected at least because it contradicts basic principles of claim differentiation. It is not supported by the claim language or the specification and it is not consistent with the plain and ordinary meaning of present.

First, the claim distinguishes between presenting and displaying.

Independent claim 23 reads, computer implemented method for providing personalized information services to a user, the method comprising, among other things, presenting said selected collected documents to said user.

Dependent claim 24, depending on claim 23, further provides, wherein presenting said selected collected documents to said user comprises displaying said selected collected documents to said user on a Personal Web page associated with the user.

The doctrine of claim differentiation, which the Court is familiar with, therefore, requires that the words "presenting" and "displaying" have different meanings.

The specification further distinguishes between presenting and displaying. Presenting is used throughout the specification, including, in the example shown here on this slide, to convey a broad concept of presenting as to provide or make available.

Displaying, on the other hand, is used throughout the specification to describe a subset or narrow set of situations in which results, for example, are shown to the user on his or her browser.

To illustrate this distinction, let's look at column 29, lines 14 through 17 of the specification. The

passage recites, the personal related pages application locates pages related to a viewed page. Upon the user's request (for example, by clicking a button with a mouse pointer), the related pages are displayed.

This indicates that the server presents pages when they are located, but it is not until after the user's request that the pages are actually displayed or shown to the user. Therefore, the differing usages of presenting and displaying in the specification is strong evidence that presenting is different from displaying.

Now I'm going to walk through the order of steps and antecedent basis disputes which run throughout the disputes in both the '040 and the '276 patents.

Beginning with the order of steps dispute.

Defendant is essentially arguing that the steps must be performed in order, whereas plaintiff proposes that no order of steps is required with a few exceptions that are explained in plaintiff's briefs and one in particular which I will discuss in more detail a little later.

So the dispute here is whether the claim should be construed to require that the steps of the claims be performed in a specific order. The presumption is that there is no order. Unless the steps of the method actually recite an order, the steps are not ordinarily construed to require one.

The Federal Circuit has articulated a test to help determine whether steps which do not recite an order must nevertheless be performed in order. The test is to look at the logic and grammar of the claims as well as the specification to determine whether it directly or implicitly requires such a narrow construction.

Here, the claims of the patents in suit clearly do not recite an order of steps. Further, although figure 2 may suggest at first glance a sequence of steps, the specification in fact teaches away from the order of steps.

Your Honor asked earlier whether figure 2 was a good representation of the '276 claim. I would suggest that actually figure 19 is a better representation of what is claimed in the '276 patent. This figure demonstrates that the steps of claim 1 of the '276 patent do not need to occur in order.

For example, the user query in blue corresponds to receiving a search query from the user.

Locate search results in purple corresponds to retrieving a plurality of documents.

Evaluate results with user model corresponds with identifying properties of the retried documents.

Monitor user reaction in yellow jumps up to transparently monitoring user interactions in the top of claim 1.

Parse and analyze the documents corresponds to analyzing the monitored data. And,

Update user model in green corresponds with estimating parameters of a user-specific learning machine.

It's also worth noting that these steps can occur in parallel. For example, the system could monitor the user interactions with data while the system is updating the user model and also while the system is using that information to estimate probabilities.

Now let's look back at figure 2. Figure 2 further demonstrates that the steps can be performed in a repeating nonconsecutive or overlapping manner.

For example, the system could analyze the documents, analyze the documents again, monitor user interactions, monitor more user interactions, update the user model, monitor additional user interactions, update the user model again, then estimate the user interest in documents, followed by providing the personalized service to the user.

These steps could be performed, as I explained, in a repeating or overlapping manner but this sequence could also be performed without another cycle of updating the user's specific data files or user model of steps 32 and 34.

The specification states, for example, it is not feasible to update the user model after every newly viewed

document or search, and also states that applying the initialization process for each update is inefficient.

The one exception that I think is worth discussing here is, defendant has criticized it in its responsive brief, is the first part of element F of the '276 patent.

The first part of element F of the '276 patent recites, identifying properties of the retrieved document. Like analyzing the document d step in the '040 patent, this step can happen at any time. Once the documents are retrieved in response to a search query, these properties are then used to estimate a probability of the document that would be of interest to the user. To the extent Google is trying to suggest the properties must be identified each time or reanalyzed each time the documents are retrieved in response to a search query, Google is wrong.

Lastly, defendant confuses antecedent basis with a grammatical requirement that the claims must be performed in a specific order. Antecedent basis, however, does not compel an order of steps.

The final dispute I'm going to dispute is antecedent basis which also runs throughout the independent claims of the '040 and '276 patents.

Defendant is basically using antecedent basis as another way to impose an order of steps. Plaintiff proposes

no construction is necessary since the claims as written make perfect sense. Defendant proposes that certain terms within the claims must always refer to the same thing. The dispute here, therefore, is whether or not the terms must be construed so that the terms and phrases must always refer to the same thing.

Defendant does not contest that antecedent basis exists for these terms, but if the claims are not read the way the defendant proposes, only then antecedent basis would not exist. Antecedent basis does exist, however, without having to read the terms and phrases as defendant proposes.

For example, let's look at claim 1, element d of the '040 patent. Step d introduces a document d. Step e introduces an unseen document d which represents a subset of document d. Step d then later refers to the document. Step E's reference to the document d does not necessarily refer to the same document d that is described in step d because not all of the documents in step d would have been unseen by the user.

The use of an indefinite article such as "a" or "an" normally introduces a new claim element as opposed to referring back to a previously introduced element, which is true for the terms here.

Thank you, your Honor.

THE COURT: Thank you. You have about

14 minutes on your rebuttal.

MR. NELSON: Thank you.

MS. BENNETT: Thank you.

MR. HORWITZ: Your Honor, one thing I told Mr. Perlson. I want to make sure it's still the case. Since we are not going back and forth, since there is no burden here, he will get a chance to get up again if he reserves some time for response; is that correct?

THE COURT: That is correct. I was going to point that out but thank you. You beat me to it.

(Binders passed forward.)

MR. PERLSON: Good morning, your Honor.

THE COURT: Good morning.

MR. PERLSON: Your Honor, I just wanted to run right into the claims here because we already got some background, and I know that both parties had submitted tutorials.

The first claim term that I would like to address is, user model specific to the user.

Generally, we'll be going in somewhat of a similar order as plaintiff. I think that as we did in the brief, rather than starting with the parameters, we've gone right to the user model learning machine terms, and, in particular, the first term, really the dispute we're going to discuss, is what it means to be specific to the user.

And I think that really is one of the critical issues here.

So, well, first of all, as to user model specific to the user, there are a few disputes. One is what it means to be specific to the user.

Google says that it's the user model that is specific to the user, and PUM seems to admit it is specific to the user but provides a construction which actually avoids that very result. And the same dispute is with user-specific learning machine and user-specific data file. And then there is also dispute of just what this user model is.

So first in talking about what it means to be specific to the user, we look obviously first to the claims. Here, the whole claim is talking about this personalization service that is provided to a user, the user. It's throughout the claims. And then in 1-C, it says that you are estimating parameters of a learning machine wherein the parameters define a user model specific to the user.

And what is key is that each individual user has their own user model. And this is really -- let me jump to the spec first because I think it's useful. Repeatedly, it says that there is a user model for each user. And it says that in the present invention.

Plaintiff skipped over that point, but it is an important point. And the recent Akamai case shows just how

important it is, the present invention language here. But it's not just in the description of the present invention that it says for each user, it says it again and again and again.

And this really is the crux of the dispute. What our construction provides is that each individual user has their own user model. I have a user model. You have a user model. Other people, they each have their own user model.

And that is consistent with the common definition of "specific." This is on slide 6, jumping back.

The definition that plaintiff provides or the dictionary, they provide, says restricted by nature to a particular individual. We have a definition that does use the word unique but then also says, concerned particularly with the subject specified, and also, intended for, applying to, or acting to a particular thing. So it's about the user. It's specific to the user.

And plaintiff, during the presentation, never really directly disputed that point. It's not entirely clear whether they conceptually disagree with that. Certainly, their construction seems to suggest they do, but never once during the presentation or in the briefs did plaintiff ever really rebut this point that each user has their own user model. In fact, many of the arguments that were made

suggest strongly that that is in fact the case.

Now, what they seem to be saying now, and I don't think this was actually raised in their briefing so we didn't address it, but they seem to be taking issue with the word "unique" in the sense that they're saying that our construction somehow provides that each of the user models are identical to each other such that my user model would be identified to your user model, or somebody else's user model. That is not what we're saying. To the extent that that is what the confusion is, that is not our intent here.

THE COURT: So that means -- and I know this gets somewhat into variables and parameters -- but if we are both being evaluated for our sports enthusiasm and car enthusiasm, your constructions would allow for that possibility. That is, just because you and I both have the same parameters doesn't mean that your model is not specific to you and my model specific to me.

MR. PERLSON: Right. Yes. Definitely. I mean really the only thing we're trying to get at here is we have a user model, you have a user model, and anyone else using the system has a user model.

THE COURT: Okay. But then the term is "specific." You want to change it, it looks like, to "unique" and it seems to me the difference between specific and unique that you are getting at is that there is something about your's

that no one else in the world can have; and if anyone else in the world does have it, then we're not practicing the claim under your construction.

MR. PERLSON: Sure. I understand the point that you are raising, and that is not our intent. And the reason why, frankly, is we think the claim language is pretty clear on its own and throughout the spec that it's specific to the user. That means that it is specific for that user and not for any other user.

So another way to maybe put it would be that it's a user model restricted to a particular user, using the language of "specific." And the point is that we're not sharing the same user model. I have a user model, and you have a user model. Each individual user has to have their own user model. Whether what is in the user model is the same or not is not, is not what we're trying to get at.

THE COURT: Let me try it this way. Maybe you will tell me it's irrelevant. But I live in a house and there are other people that live in my house. I have a specific address, but I don't have a unique address. As I understand it, I don't live in a specific house under your construction because I share the house with a number of other people.

MR. PERLSON: Well, I guess the problem I'm having with it is that the patent, in the context of the

patent, we're talking about a user, it's a one user, so the analogy of the house or multiple people, I think that is what I'm grappling with. If you were in your own apartment and you are living by yourself, I suppose you had an address and that apartment would be your apartment, and then somebody else would live in a different apartment. That is why I'm struggling with the analogy.

But the point we're trying to get at here is it's each individual user has their own user model. If there are 10 users, there are 10 user models. And that is really the critical dispute about all of this.

Now, whether it's being said through "unique to the user" as we've said it or "restricted to a particular individual" or some construction that requires that to be the case, that is really the critical issue. And I think that, you know, I will explain why their construction doesn't get at that.

Again, it's not entirely clear whether they dispute this, but I think that their construction is designed to avoid the result that each individual user has their own user model. And, you know, they made comments about what we're trying to do for purposes of noninfringement. Well, the reason they're trying to do that is because they don't want to be stuck with a situation where each individual user has to have their own user model because they're

worried about how that affects their infringement case.

THE COURT: I'm pretty sure nobody is here out of the goodness of their own hearts; right?

MR. PERLSON: Now, one of the points from the specification that was raised was the, I guess the third quote from the spec, which is actually identical to the second. Well, actually, the third.

But they cited the first part of the sentence in one of their slides, the user model represents the user interest in a document independent of any specific user information need, and omitted the second portion of it; and then in other slides, they did address it and, it says this estimation is unique to each user. And what that is saying is that this user model represents, you know, your interest in a document and that representation, that estimation is unique to you.

THE COURT: Is that, in fact, the only place where the word "unique" appears in the patent?

MR. PERLSON: I think that is probably right. Yes.

Now, this is addressed in the brief, but I think it is important that, you know, the use of this invention, the present invention is used to describe the user model as being for each individual user, and it's also the only method described. Nowhere in the patent does it describe

where a user model specific to the user is shared with multiple users. And I think the recent Akamai case just further shows that that is critical in how you construe the phrase.

And to be clear, we think that the "specific to" language on its own shows that our construction is correct and that this notion there has to be one user model for each individual user is required by the claim language "specific to." So it's not like we are trying to read something in even but it certainly can't be broader than that.

THE COURT: What about they try to distinguish Akamai from the specification language that says, you know, the following preferred embodiment of the invention is set forth without any loss or generality, something to that effect. Was that present in Akamai? Is that a reasonable distinction?

MR. PERLSON: Your Honor, I have a slide ready for that, too.

THE COURT: All right.

MR. PERLSON: In fact, Akamai squarely rejects that argument. And, in fact, we pointed this out your Honor in our statement of supplemental authority and they just ignored it, as they do here.

But Akamai said, this court also acknowledges that much of a language describing a string indicating a

URL, the invention -- and that was the limitation that was at issue that the Court eventually found was appropriately included in the construction -- occurs within a entitled detailed description of the preferred embodiment. And then it notes that figure 4 is referred to as a preferred embodiment. But it goes on to say that the specification as a whole makes clear that including the object's original URL is the only method to achieve the claimed association. Then it goes on to say, indeed, it is the only method described.

And in the interest of time, I won't, you know, go over this, but our slide 10 kind of talks through how really this is the same issue where here, for each user, having his own user model is the only one described. And we would submit the construction that would be broader than that would be inconsistent with even this very recent Federal Circuit authority, in addition to Phillips and its progeny.

We're not the only ones, your Honor, who agree that each individual user has his own user model. Mr. Konig testified, the inventor.

I took his deposition and I said: What is the difference between a group model and a user model?

And he said: Well, group model represents the combined interests of more than one user. And a user model attempts to model the one particular user.

And this is exactly our point.

Now, the plaintiff says, oh, you should ignore Mr. Konig. He doesn't know anything about the patent. He hasn't read it in 10 years.

Well, first of all, he was deposed. He was prepped for two days, and he is here representing the plaintiff. He is an interested party. And, certainly, I think it speaks volumes as to what is going on in the patent and what is really claimed when the inventor and interested party testifies in a manner consistent with how he said it. And we cited a Federal Circuit case, Voice Tech, that says it's appropriate to rely on.

THE COURT: That portion of the testimony you are showing me, he doesn't say it's uniquely modeling the particular user.

MR. PERLSON: Right. And, again, I don't want to get --

THE COURT: I understand you are not wedded necessarily to the word "unique" but you are wedded to the concept of if anybody else shares the identical model, then they're not practicing the claims of this patent.

MR. PERLSON: Well, let me say it this way. I'm not sure that that is right. If, by coincidence, I have a model that is identical to yours but it's created for both of us, separately, then I think that that would be included.

I'm not saying -- we're not saying that that is out, but, you know, as -- I mean, you know, as plaintiff conceded, as a practical matter, that is unlikely to happen. But we're not saying that if, by chance, two people have identical models, that there would be no infringement, or that that wouldn't meet that particular element.

What we're saying is those two people have to have their own model. Whether, by coincidence, they somehow have the exact same model is not going to take it out of the claims.

THE COURT: You may have a slide on this, but what about the initialization and the trying on a hat portion?

MR. PERLSON: I do have a slide on that.

This is slide 20, your Honor.

First of all, initialization is not the subject of the independent claims. If you look at any there, it's not a subject. In fact, it's dependent claim 28 talks about initialization. So it's not even in the independent claims.

The independent claims talk about monitor the user interactions and then you update the user-specific data files. And then you estimate the parameters of the learning machine, and then it talks about the user model is specific to the user.

Now, if you look at even the language cited in plaintiff's own brief, it says, the initialization is

performed without any user specific information in the situations where there is a prototype user or a hat. This is not a user model that is specific to the user. It's a general user model that might be used by a user but the language that they cite shows that it's not a user model specific to the user.

And, in fact, later on, it goes on to say, when they're talking about hats -- and this is at column 24, 19 to 21 -- it says when you are using a hat, your actions don't affect your own user models. I'm sorry. That they only affect your own user model, not the prototype user model. So there is a distinction. This is completely irrelevant to the user model specific to the user.

Now, in going back to plaintiff's construction here, plaintiff admits in their briefs that the model needs to be specific to the user. But if you look at their construction, that is not what their construction says. Their construction provides that there is data specific to the user. And then, again, they kind of say something similar in their language about "related to" here. They say that -- this is slide 18 -- that PUM views that specific to the user only requires the user model be associated with the specific user or relating to the specific user. And they justify this by saying that you just need to use data from the user and then thereby it becomes related to the user.

But that is not what the patent is talking about. First of all, there is no support for this notion of related or specific to. I think that they, plaintiff pointed to slide 59 in which they purported to provide supports of why this associated with language would work. And I think if you look at that slide, none of those quotes that they provide use that language or anything like it.

But here is really what is going on here, your Honor, is that -- and this is slide 16 -- is that the patent talks about what is on the right. This is the critical issue that I was referring to. That each user gets their own user model.

Plaintiff is trying to get the result on the left where you can have multiple users using a generic user model, and when those users are using that user model, it's specific to them. That is not what the patent describes, and that really is the critical thing that is here.

And part of the reason -- another reason why that can't be right is, in fact, when the patent talks about a shared model, it is referring to a group model. And I think that you had asked plaintiff's counsel about that situation. That is what the situation is when there are multiple users that are sharing a model. It is a group model, and that is absolutely not a specific model. And just because the group model might take some information,

you know, from the user on the left or the user on the right and feed that into the group model, that doesn't make it specific to them. It's specific to the group.

So the only way that you have a situation where it's specific to the user is on the right here where each user gets their own user model.

So going on to what this user model is, our language provides that it is created and updated by the learning machine. I don't think there is any dispute that that is what it does. The specification, as we show here on slide 21, is perfectly consistent with that.

PUM says the claims don't require it, but I actually haven't seen any explanation why that is the case. Instead, they say that there is a definition of the user model.

Well, because there is a statement in the specification that the user model with its associated representation is an implementation of a learning machine. Well, that language is all over the place. Is it a user model that has an identity? Is it user model that has a function? And that is not definitional.

What the user model is, is a data structure. And there is no dispute that it is stored in a data structure. And, again, here, Mr. Konig agreed that it's stored in a data structure; and what plaintiff is really

trying to achieve here is really going back again to this notion of the user model, the generic user model, they want to say by using data that is specific to the user and applying it to a generic user model that you implemented a user model in a way that is specific to the user, even if the user model itself is not specific to the user. That's not what the patent claims, and the language of their construction is specifically designed to allow them to later argue that, and we would submit that that is completely contrary to the claims and that construction should not be allowed.

So the next dispute is user-specific learning machine. Again, the dispute is here as far as what it means to be user specific versus specific to the user, I don't think there is much dispute that the issue here is the same. And, again, you know, we cite to the same evidence here.

One thing I will -- and, again, getting back to this point of plaintiff trying to say that merely by using data of the user makes it, the user model specific to the learning machine -- specific to the user. The same thing really happens here with learning machine. They're saying that it's the past observations and experiences that are specific to the user, not the learning machine itself, and so they're really trying to accomplish the same result that we just went through as to user model through their

construction of user-specific learning machine.

The next dispute is what is this learning machine.

We all seem to agree that the learning machine learns and that it makes predictions and then it improves over time, but we have some other disputes.

It seems like the intelligent decision dispute is now out, so I won't go over that. But then there is a dispute about new data and past observations and experiences and then whether the learning machine is a program or a model or mathematical function.

Now, here again, like with our definition of user model, there really doesn't seem to be any dispute that the learning machine uses parameters and outputs a probability. In fact, much of plaintiff's presentation seems focused on exactly that point, and so there really shouldn't be any dispute there. Again, they have dropped intelligent decision language so I won't go over that.

But we do seem to have -- I'm not sure whether there is a dispute or not, but there was an issue that was raised as to whether our construction requires that with every update, there is an actual "improvement."

I don't think that is what our construction requires. Our construction requires that you have to at least attempt to do that. And I don't think there is a

dispute on that either.

THE COURT: So you don't have a problem with "attempt to improve" instead of "improve?" I think that is where that dispute came up.

MR. PERLSON: Right. I guess the -- that's right. The program has to at least attempt to improve over time. Yes.

THE COURT: Okay. I don't think you have a dispute on that point.

MR. PERLSON: Okay. Well, we're making progress.

THE COURT: Slowly but surely.

MR. PERLSON: Another dispute, which, again, I'm not really sure is a dispute at all, is this observations and experiences language. They say theirs is better than ours. They don't really say why. We tried to come up with a solution because we thought that what they were saying in their briefs was that the learning machine improves from the monitored use interactions with data. So we said, okay, let's define it as that.

Apparently, now they're saying, no, that is not good enough because there are all these other things that can improve it, too. Well, but all the things they identified are new data, so I'm not really sure what the dispute is here.

THE COURT: I'm not sure that I'm sure either,

but it seemed like they were emphasizing the past observations and experiences, and that something about your construction would read out that past information as a basis for improving going forward.

MR. PERLSON: Well, I don't think that it does that. I think that the problem with the way that plaintiff's language read is that it seemed to suggest that you could just look at something in the past, so let's say you started this learning machine on Day One and there was data that happened, you know, before that. And then, you know, 10 days later, you updated and you are using the data that happened before Day One but you are not looking at what happened in between, and the data that happened before would be past experiences but what you are using to update is the new data you are getting as you go along. And I think that their construction actually allows for you not to actually have to use that new data, and that is really the point that we're trying to make.

There is a dispute about our use of the language of program versus function. I mean the claim says it's computer implemented. It doesn't use the word program, but it's computer implemented. Well, what is implemented in a computer? It's a program.

They say that it's a function. Well, even their own -- this is their own evidence, your Honor, says

that, you know, that the learning machine is capable of implementing functions and that these, you know, functions or algorithms are usually implemented in software.

Instead, they replace it with some model language, but, you know, first of all, the claim -- there is a user model and there is a learning machine. They're different terms, and they shouldn't have the same construction. And this is the prosecution history says this, too, on slide 37.

There are three limitations here: A learning machine, parameters, and a user model.

Now, they responded to this in their brief and said, well, ours is the same. I mean ours is consistent about this, too.

Well, I'm not sure how that is possible mainly because, if you noticed, they defined a user model as an implementation of a learning machine and they defined a learning machine as a model. They're both referring to each other, and they're circular. So to define a learning machine as a model, I would submit, basically is not consistent with the claims and not consistent with the prosecution history.

And the next claim term here is "parameters of a user-specific learning machine." I think that this dispute has gotten far more complicated than it really needs

to be. And I guess maybe I should just explain it before we get into the slides and it might make things a little clearer.

So, obviously, the constructions that we have are similar; right? And so plaintiff is saying that the parameters are the values or weights themselves. And we're saying, well, there are variables and these variables have values or weights themselves.

Then when you look at the estimating phrase, which includes parameters, when you are estimating parameters, what you are doing is you are estimating the values or weights, you know, of the variables and you are coming up with a number. And there doesn't seem to be any dispute on that. That is why we construed estimating parameters of a learning machine as we have, and we've construed parameters as we have.

So I think if we go into talking about this, in the patent, this is slide 42 is a good explanation of what is going on here.

So this row there is, that is the parameter, and it has a weight or value. That is .72. The .72 is a number. It's a value. In and itself, it doesn't really have any sort of significance if it's not attached to the variable. So that is the variable and it's computed. And the learning machine is made up of, has all these variables,

and they're computed through the learning machine.

And this is actually perfectly consistent with the extrinsic evidence by the plaintiff. They said parameters are a variable that must be given a specific value. That is exactly what we're saying.

If you look at what Mr. Konig said, he said: The way that I think about it, the variable that represents the user interest is this parameter. The value for a specific user is the value of this parameter.

I'm sorry. I think I may have misspoke.

The value for a specific user is the value for this parameter for a specific user.

So there are the parameters and then the parameters have numbers. And when you are estimating the parameter, you are estimating that number. And that is exactly what our construction is intending to provide.

And it's interesting because Mr. Konig said it's kind of semantics. And maybe he is right, but I think that the semantic issue is what we were trying to deal with by having the two constructions the way that they are. Because, you know, what we're talking about is estimating parameters, and I think that our construction actually accurately describes what is going on in the specification and what is described and what this invention is really about.

THE COURT: What about the tunability point that was put to me? That it wouldn't work, we couldn't do tuning if I take your construction?

MR. PERLSON: I don't understand -- I heard the argument. I don't understand it because our point is that when you are estimating a parameter of the learning machine, you are estimating the values of the weight. That is tuning. That is what the estimating of the parameters are. You are tuning. That is exactly what our construction allows for.

THE COURT: So you agree you would be estimating the weights or the values. You just don't want the Court to tell the jury that the weights or the values are these parameters.

MR. PERLSON: Exactly. Exactly. That is why we have these two different constructions. Because I think that this, the way we framed it, is, you know, the clearer way of describing what is going on here.

There is a procedure. It's estimating parameters, and our construction says what that is in an accurate way that is consistent with, you know, the intrinsic evidence, extrinsic evidence and the claims, and there really shouldn't be any confusion, and I think ours actually eliminates the confusion.

THE COURT: In Mr. Nelson's framework, the level of interest is sports. He terms the variable at the

80 percent or 10 percent, depending on how much we like sports, is the weight or measure. In your view, though, how much we like sports isn't the parameter.

MR. PERLSON: No. Actually, it's the inverse.

THE COURT: Okay.

MR. PERLSON: So they're the ones defining the interest in sports as the number. We're the ones saying that is the variable and the variable has a number. What is your interest in sports? There is a number attached to that. That is what is on slide 42.

And, you know, it's not the exact sample, obviously, that you just came up, but the parameter is the row and the weight or value of the parameter is .72. That is what we're providing. I think the way you had just suggested to me is flipped from what I think.

THE COURT: I confused it. Yes.

MR. PERLSON: Well, unless your Honor has any further questions on that one, I'll move on.

So the next phrase I'll address here is "estimating probability." And, Your Honor, we have included these together because we think that the point as to them is really related.

There is no real dispute as to what this P(u/d) phrase means. We were able to work together and come to some agreement as to what that means.

But there is a dispute as to what estimating means and what probability means. And it's interesting because I think that when you heard plaintiff's presentation on parameters, it was all about math. We're talking about math, we're doing everything about math; and then, you know, when we're talking about probability, it seems like we're now starting to get away from that. And we would submit, your Honor, this is in fact all about math.

On slide 47, we show where the specification talks about how the mathematical framework is based on Bayesian statistics. It appears there is no dispute about that. Mr. Konig said the same thing and, you know, as he did today, he admits that in his brief.

The specification repeatedly talks about calculating probabilities. Sure, it uses the word estimating. But if you look, whenever it is talks about estimating, what is actually going on here is calculating. I mean this is about math. These probabilities are calculated through math. It's the number, the weights. You use the weights, and you put them together as the patent describes and you come up with this number, and you do that by calculating.

And on slide 48, we cite the Bell Atlantic case, and I think that this and other cases such as Akamai would support really the same points here as that. There is no

disclosure in the patent of estimating meaning anything other than calculating.

And I think, your Honor, it seems like there wasn't any dispute about that in the parameters. In that context, it seems like plaintiff conceded what you are doing is making calculations as well, and it really has the same meaning here.

This is from one of plaintiff's treatises that they cite, it's also cited in the spec, and it refers to learning as the process of estimating. Well, okay. But look at what they're talking about. It's done through math. It's all math.

I asked Mr. Konig: When probabilities are estimated in your patent, those probabilities are estimated through mathematical calculations; right?

Yes.

Now, when we're talking about the probability -- that last bit was a little bit more about the calculating. We're now moving on to probability, and both parties have submitted dictionary definitions.

What we need to do with a dictionary definition, as the Federal Circuit has told us, is that we have to, to the extent they're relied on at all, is to look at definitions that are consistent with the intrinsic evidence. What is consistent with what the patent is talking about

here? The task is not to find the broadest possible dictionary definition. That sort of Texas Digital and its progeny were rejected by Phillips.

So where do we go to find what the meaning would be? Well, we went to the American Heritage College Dictionary which talks about statistics and provides a construction that plaintiff appears to concede is consistent with ours; but, you know, it wasn't just us. Plaintiff went to the Oxford English Reference Dictionary.

Now, they didn't cite this to you, your Honor. In fact, in their briefs, they gave you like definition one and two and they omitted the definition for math, but that is also consistent with us. And this is the context here.

Now, plaintiff tries to make a distinction between this notion of frequency and measurement of belief to say that somehow our construction is inconsistent with that. And I had here a note from one of my associates who helped me kind of frame this issue here and so, hopefully, I'm not messing this math up, but it's really this is a distinction without a difference.

It seems like what they're pointing to is the fact that when you are flipping a coin, you have a 50/50 chance and there is a 50 percent chance it's going to be heads and a 50 percent chance it's going to be tails, and that is consistent with this frequency notion. And they're

saying that somehow the probability means something else in the context of Bayesian statistics.

And, here again, there is kind of a semantics here. Bayesian statistics, you take information you know and you look at information you have in the past and then you have to apply, you know, some knowledge to it and make some, you know, judgments, and that really has nothing to do with the actual computation itself but perhaps how you set up the system or set up the parameters and that type of thing.

So the percentage will represent your belief. So there is a 70 percent chance that a user will be interested in this document. Now, it's true that that expresses a belief but it's a subset essentially of belief. There are other ways of expressing a belief, too. And I think plaintiff talked about them.

Like he really likes this car. Well, that is my belief he likes that car, but that is not probability, and that is really the difference here is that there is kind of -- they're kind of saying, well, probabilities are beliefs so you should define it as a belief.

Well, that is not really accurate. I mean a compact car is a car. That doesn't mean that you define a compact car as a car. It's a compact car. So it's really if you are drawing like a Venn diagram, your Honor, like the

probability would be within beliefs.

And there also doesn't seem to be any dispute here, your Honor, that what you are doing with the probability is a number. We're coming up with a number, and I think in plaintiff's tutorial that they had said it didn't need to be a number.

Now, there wasn't -- they didn't say what that could possibly be, and the patent certainly doesn't say it, and I haven't heard any suggestion that it can be anything other than a number.

And I think this slide really demonstrates kind of the distinction between what our construction allows and what we think patent describes and what plaintiff's construction describes. I mean the patent is talking about math. It's using this computer that using these formulas that I'm not going to try to pretend to try to explain to you and it comes up with a number, and that number is the percentage chance that the user is interested in the document.

What it is not doing is what plaintiff's construction allows for, just approximating a degree of likelihood or belief. It's not saying pretty sure he is interested, he is probably interested, more likely than not. That is not what is going on at all.

In fact, in the context of the parameters, plaintiff's presentation made this clear. He is talking

about how in the parameters he is using these values or weights. And he said, well, he is pretty sure he likes cars as a parameter. And you are not saying he -- I'm sorry. He was saying whether or not he likes cars is a parameter. And you are not saying he is pretty sure, we're pretty sure he likes car. He is saying there is a number attached to it. And another parameter might be whether he likes Fords, and there would be a number attached to that, too, and you are taking those numbers and you are coming up with the probability, the percentage chance of interest in a document. You are not combining your pretty sures and maybes to come up with I'm pretty sure he is interested.

And I would submit that those three examples that we have on slide 54 would, each one of them would be approximating a degree of likelihood or belief. And that is not what is going on in this patent.

The next one I have is posterior probability. We'll submit that on the briefs. I think that that is sufficiently dealt with there.

What time did I get started? 11:30?

Well, the next one I will go to is user-specific data files.

Here, there is a dispute about whether they need to be user specific and whether they need to be data files. We say they need to be both, and we would submit that

plaintiff seeks to eliminate both of those requirements.

The user specific should be the construed as unique to the user for the same reasons as user specific -- user model specific to the user and user specific learning machine -- you know, we've had some back and forth about what unique means and I think those same issues would apply here.

And I will note on -- but we do think that there is a requirement that the data file, each user has to have their own data file. That is what it means to be user specific. And I think if you actually look at slide 66 of plaintiff's dec., that is how they're displaying it, too. They had a row and then there was a -- they identified a user through some number, and then they had all the information about that user, but it's about that user. It's not multiple users. And that is really what we want, we think the construction needs to have, and there seems to be a dispute on that and it should be resolved.

The next dispute is whether there need to be files. Frankly, you know, the claims say files, files, files, again and again. Slide 63. The spec talks about them being files.

In its brief, plaintiff did point to files in other situations in the spec. I'm not sure why because in those situations they were also used as files.

And, you know, this is I think useful to understand what is going on here. They're saying that the claim defines the term but they're really repeating claim language. There is really no point. I mean no construction at all would be better than what they're providing because what they are doing is limiting -- they're basically eliminating the user-specific data files.

And here is an example I came up with just to kind of, from a grammatical point of view, show why what they're saying doesn't really make any sense. You know, they're saying that the wherein the user-specific data files comprise language provides a definition.

Well, we came up with an element here, baking a pizza wherein the pizza comprises pepperoni and mushrooms. Under their rationale, the pizza would be defined as pepperoni and mushrooms, but that is not what a pizza is.

And, really, the same thing is true here with the user-specific data file. You can't do that with pointing to the rest of the claim, and that is exactly what they're doing.

There is no basis in the spec to suggest that the data files don't need to be files; and we would submit that that would be improper to adopt such a construction.

THE COURT: Sometimes, though, comprise is definitional.

MR. PERLSON: I am not saying there isn't a case where comprise isn't definitional, but it isn't here, and, in fact, there are numerous cases that say that comprising means consisting of. And, usually, this comes up in a situation where somebody will be going for a construction that will say it's comprising but it can't be anything else. That is usually where the terms -- you know, someone, a defendant might be saying that something comprises A and B and they'll be arguing, well, that means that it comprises A and B and nothing else. And most of the cases say, well, no, it can also have C, B, A, you know, several other things.

Most of the cases that you will see about comprising really aren't on point here; but, you know, just as a matter of common grammar, it has to be a data file. It contains those things obviously that are in the claim, that the claim says comprises but that does not define what the data file is.

Going on to "user."

Here, we have the disputes as to whether a user is a person or a person as represented by a tag or identifier.

I think, as your Honor observed, the patent, you know, is talking about a user in the sense that it's a person that someone is sending an e-mail and someone looking on the Internet, browsing documents; and, of course, when we're talking about personalization services, it makes sense

then. We would be providing these services to a person.

And, in fact, plaintiff, in their brief, admits that using -- a person using a computer is the common meaning of user. And if you look at the brief, I think they consistently are using it in that same way.

The specification does as well. You know, the person is him or her. It's not the tag or identifier. It is him or her. The tag or identifier claim never ever appears in the spec, nothing, it, or anything like it.

And Mr. Konig, I asked him: Okay. So a user in the context of your invention is a human being; is that correct?

Is human being operating a computer.

Now, PUM, again, they admit, in lay parlance, the user is the person operating the computer, and they are actually arguing here there is a special definition. So, essentially, you know, that there is a disavowal of the meaning of user.

Now, we know that when you are disavowing something, a plain meaning, that there has to be a very clear indicator of that. There is nothing even close to that here. Instead, as we've just shown, user is a user. It constantly uses a person.

Now, the one thing that plaintiff really seems to be hanging their hat on is this user u notion, but we

would submit, your Honor, that has nothing to do with the tagger identifier construction that they provided. All the patent is saying, when it is talking about a user u, is a convenient way in all those formulas we have seen in the patent to denote it. It's like probability, P(u/d). It's using -- it's just a shorthand notation that is used in, you know, statistics and those books. You look through it and see a bunch of Us. That is how you express it in a formula. It's not talking about a tagger identifier in a computer.

THE COURT: There is some representation of a person in the computer; right? That is not in dispute.

MR. PERLSON: Well, in what? In the patent? The patent doesn't say -- the patent does not say in any way how the user is going to be tracked. There could be any number of ways to track the user.

THE COURT: In 1999, and the way I'm thinking of offhand is a webcam, watching the person physically in the room. Wouldn't one of ordinary skill in the art in 1999 know that the user is the representation of the user in the computer because that is what the computer talks to?

MR. PERLSON: No, I don't agree with that. And let me explain.

The one of skill in the art would recognize that a user is a person operating a computer. It's a live person that you are providing personalization services to.

Now, of course, one of skill in the art would recognize that the person is not -- there is some -- in plaintiff's tutorial, they showed this Robert Smith walking into a computer and suddenly being inside the computer. Obviously, they're not obviously suggesting that the person was physically inside the computer, but they would recognize that is not going on, and that there would be ways that you would want to track a user so that you can monitor interactions, so you can update user-specific data files, and there can be any number of ways to do that.

The point is the patent is not talking -- it's not -- it's not talking about that. It's just not addressing that issue. What it is addressing is what you are doing in relation to a user, which is a person.

Now, what Google does or anyone else does in connection with the services they provide, whether or not those individual instances are monitoring user interactions, whether those things are actually monitoring a person is not an issue of claim construction.

The point is that, later, someone will determine whether what Google does or, you know, someone else, whether that is actually monitoring the user. But that doesn't change the fact that it's the user that is being monitored. And, obviously, there, the user is not inside the computer doing that.

THE COURT: So your reading of the patent is that I won't find any instances where a user, the word "user" is being used to refer to something other than a person.

MR. PERLSON: I think that is right. It's always a person. It's never -- it's certainly never a tag or an identifier. There is nothing in there about how you are tracking. They reference cookies and how Google does the cookies. Certainly, it's not talking about cookies. And to the extent they want to define a user as some sort of computer representation of a user, they could have done that. They could have done that. They could have said transparently monitoring user interactions by looking at a representation of a user in a computer. They didn't do that. They said transparently monitoring user interactions.

So what is going on here is it's a user. And, you know, this notion that -- I also reject this notion that we're somehow trying to manufacture some noninfringement argument here. We didn't even suggest initially that user be construed because, frankly, I didn't think I would have to be here arguing as to whether a user is a person or not. And so, you know, this is not a dispute of our creation, your Honor.

Next is, "document."

You know, electronic file or text or media.

We pointed out in our briefs that there is any number of places in the claims that talk about the document that don't make any sense unless the document is an electronic file.

You know, I listed some here: linking to a document, properties of a document, crawling network documents. They didn't respond to that in the briefs, and I didn't hear any response to that here.

This is slide 77.

We pointed to very similar instances in the specification where the same thing, documents are talking about in ways that makes no sense unless it's an electronic file. Again, no rebutting.

Plaintiff had this slide -- this figure 13 at slide 78. It was up on the screen briefly but you didn't address it. Here again, documents don't make sense unless they're electronic files.

Slide 79, figure 18. Again, all these things that are going on only make sense if it is an electronic file.

Now, in their brief, they did say that all of the actions above don't have to be performed on all documents. Well, that is neither here nor there. The point is that the use of documents in the claims and specification only make sense if it's electronic documents. Whether or not you are

linking to documents doesn't change the fact that what we're trying to do here is figure out what document means in the context of this patent.

Now, plaintiff's construction would allow for interpretation of the term that is entirely inconsistent, we would submit, your Honor, with what is going on in the patents. I mean it's text or media, so a single word could be a document. A web page with 500 words could be 500 documents.

Claim 7(e) and (f) discloses identifying an author and age of a document.

Well, if there is a word -- if there is a page with 500 words, does each one have a different age? We're trying to figure out when one was typed and not the other. That is not what the patent is talking about.

And, again, we haven't heard any -- this was raised in our briefs, and it's never been rebutted.

One argument that plaintiff did raise during its presentation is this notion of a dynamically created page. And I'm not sure why they think that our construction would preclude a dynamically created page. We don't think it does, and they didn't explain how it does, and I don't think it does.

What they do say, they say that the specification defines document as text or other media. But

it doesn't define it. It says what a document may include. It may include text. It may include media. Sure.

And our construction is perfectly consistent with that. Your electronic file can include your text, it can include your sound, it can include the video. And it's argument.

We would submit, your Honor, that it's only our construction that would be consistent with what the patent is actually talking about.

THE COURT: But you don't mean electronic file to exclude text or other types of media.

MR. PERLSON: Well, of course, not. It would include. In the electronic file, it could include text or any other type of media.

I mean I think, you know, if it would say an electronic file that could include text and all the other things, if that is the hang-up, I don't think we would object to that. I think electronic file is simple among itself, but ...

So the next dispute as we're talking about the documents is "unseen document." And, here, we're talking about whether the document is unseen by any user or unseen by the user.

And, now, the specification talks about these collaborative filtering systems. I think both tutorials

actually describe these systems in the context of Amazon where someone would be, you know, looking for a movie, I think, and they look to see what other people like you, what movies they liked and suggest one of those movies to you.

But the problem that the specification talks about with these systems is that an item that has never been rated cannot be recommended or evaluated. So if no-one has ever seen this movie, then it's not going to be recommended to you because there is no one like you who has seen the movie that would allow you to be recommended.

And there is a further comment later on, so that a product can be recommended even if it has never been purchased or evaluated previously. Again, this is a similar distinction. This is on slide 85.

And then during prosecution, the claims were rejected over the Breese patent, and then the plaintiff or the patentees added the limitation where it used to be the document d and they replaced it with the unseen document d.

Well, there was another rejection, this time under Gerace which was a collaborative filtering system, so the applicants distinguished Gerace on the basis that unlike the patent as amended, it does not teach documents unseen by any user. And I mean that is what it says.

In other words, it is not taught, nor is it suggested how the first set of users or the first user R is

presented with an unseen document or an unseen ad. And we would submit, your Honor, that they would be bound to this and that plaintiff should not be able to provide a construction inconsistent with this construction because, you know, they made a deal with the Patent Office. They made the representations and, as part of their bargain, their patent was offered, and they can't come back in and now claim something else.

THE COURT: That is clearly the law, but help me understand how their construction is actually doing that.

MR. PERLSON: Sure. So Gerace allowed for -- put simply, the distinction that they were trying -- that the applicants were trying to raise was that Gerace didn't allow for determining an interest of an unseen document. I mean it seems pretty clear that that is what is going on.

But that distinction only makes sense if it's a document unseen by any user because Gerace allowed a determination of interest to a user for an unseen document by them. I mean that is the whole point. The whole point is that you are relying on opinions of others to determine whether a document is of interest to you.

So Gerace allowed you to look at documents that were unseen by you, but what it didn't allow -- and this is the distinction that they were raising -- is that it didn't allow for review of documents that hadn't been reviewed by

anybody, and that is the distinction they're making. So that distinction only makes sense if it is an unseen document by any user.

If it's an unseen document by the user, Gerace could do that. I didn't have to -- in order for it to recommend a document to me, I didn't need to see it, but somebody else did. Somebody else in my group did. And the applicants were saying, well, in my patent, you don't have to worry about that, because nobody needs to see it.

THE COURT: Well, under plaintiff's construction, their system allows you to make a prediction whether the document has been unseen by everybody or whether it's just been unseen by the user. So I'm just trying to understand what it is they disclaim that they're now trying to claim back. That is where you are losing it.

MR. PERLSON: Sure. Sure. So I guess I agree that their construction would allow the fact that it's unseen by anybody but it should be required that it's unseen by anybody.

THE COURT: So you think in the language you just showed me, they specifically disclaimed being able to make a prediction as to whether a user would be interested in a document that the user hadn't seen but others had seen? Is that the disclaimer?

MR. PERLSON: And other users haven't seen.

They're saying, in the patent, you could determine an interest in a document that both the user and other users have not seen.

And, again, going back to what Gerace is about, Gerace is about allowing you to determine an interest in an unseen document to the user. I mean that is what it does.

But what the patentees were saying it doesn't do is allow you to review, to determine interest in a document that is unseen by any of the users. And if that distinction is not included in the claims, and if that is not how unseen document is interpreted, then the distinction they are raising doesn't make any sense, because Gerace did allow you to determine an interest in a document that was unseen by you. And so plaintiff is, by making that the only limitation and saying that it doesn't need to be unseen by you and also unseen by the other users, they eliminated the only thing that distinguishes Gerace.

THE COURT: I think I understand you.

MR. PERLSON: Okay. And, your Honor, the plaintiff talked about dependent claim 7 and the specification, and, you know, we addressed this in our brief. You know, the fact there may be other claims that existed before they disclaimed this meaning shouldn't allow them to recapture what was done through prosecution history.

THE COURT: There is no legal significance to

the fact that claim 7 emerged nonetheless? Was granted to them?

MR. PERLSON: I'm not aware of any legal significance. The legal significance that I know of is that a disclaimer -- and this is in the context of the preferred embodiment. But that there is a disclaimer. It doesn't matter whether there is -- even if it excludes a preferred embodiment, I mean they are held to the bargain.

The fact that, you know, maybe someone just didn't think about it. Well, gees, I really want to get claim 1 in. How does that affect claim 7? Maybe nobody thought about it. May they should have pointed that out to the Patent Office, but they didn't. But that doesn't mean that plaintiff should be able to come back in here after the applicants made their deal with the Patent Office and undo what they did to get the patent granted.

Now, going back to documents. I guess one of the last document-type phrases here.

This is a phrase about indefiniteness. You know, the law is clear that if there is not an objective standard to be applied in determining infringement that the patent would be indefinite.

Here, really, the question is whether the "of interest" itself presents such a subjective question. And we would say that the patent talks about determining whether

a document is of interest to the user. And that is precisely a subjective test.

Now, plaintiff cites examples from the specification as to what, you know, the specification describes as positive examples that come up with some sort of what would be an objective measure, and they talk about -- and this is slide 93 -- talk about things like visited websites and search results.

But that doesn't necessarily mean that a document is interesting. You know, you visited the website and, gees, this is ridiculous. I have no interest in this at all.

Or a document that is saved in favorites is another one. Well, it could have been bookmarked by mistake. There could have been some other reason why he bookmarked it.

The user spent a long time viewing the document. Maybe he just left the room. That is not an objective indication of it.

Or the fact that the user followed links in the document. Well, maybe he did that because he didn't like what he found in the document.

So none of those are objective bases which can determine interest.

And someone who is trying to practice this

invention, maybe they're tracking these things for some other reason. Are they determining whether someone is, you know, the user interest simply because they're doing these things even if that is not their intention in tracking them? And the ambiguity regarding these positive examples shows that this is really an unanswerable question.

And, once again, Mr. Konig really confirmed just the confusion that exists here.

And I said, you know, really kind of posing plaintiff's construction to him:

"Question: You would agree that clicking on a document is a positive response to a query?

"Answer: Not necessarily. As I said, I think clicking on a query, clicking on any page is a strong indicator that you might like the content of the page, but it might not be. It is not the only factor. Like I said, you might click on something because it looks interesting, and then you realize it's not what you were thinking, and you go back to the original search results page."

I mean this is really the ambiguity here. The plaintiff is saying that there is some objective basis, but the objective basis they're pointing to is not objective at all.

THE COURT: But objective doesn't mean perfect. I mean you are just saying he is not going to always get it

right, but that doesn't make it insolubly ambiguous.

MR. PERLSON: Well, I think this is a notion of the problem here. Plaintiff was highlighting it in their brief and I don't recall whether he said it in argument. But in the brief, he pointed to Mr. Konig's testimony that the subjective notion of the actual user interest is not important, but the claims says you are determining whether documents are of interest or not of interest to the user.

Now, there could have been a different way that you could have drafted that to say something different, to say looking at, you know, indicia of user or tracking how many times a user clicked or doing something specific, but they didn't do that. They said that this is what you need to do. Well, how can you do that?

And, basically, plaintiff is saying you don't even need to do that. They're saying the subjective notion of the end user is irrelevant. So, basically, we're presented with a situation where we have a term in which you are determining the user interest in a document and plaintiff is saying it's definite because you don't need to determine the user interest at all because whether the user is interested in the document is irrelevant.

Well, that is completely contrary to the plain meaning of the phrase, and it's basically we're just kind of going in one big circle. And someone who is trying to

practice the patent and trying to figure out whether what I'm doing is determining whether a document is of interest or not is not going to be able to know what they're doing is determining interest or not. I mean because, you know, someone may say, gees, I'm tracking how often somebody clicks on something but I know by doing that, I can't determine whether a document is of interest to the user for the reasons that Mr. Konig admitted. Am I infringing? They're saying yes, but that is not what the claim says at all.

And then the positive examples don't give you real positive examples of determining user interest. There could be any number of examples where that could come up with, so you have this problem of somebody trying to design a system that does not infringe and they wouldn't be able to do it.

This is really the notion of what indefiniteness is trying to solve. We don't want to be in a situation where somebody can't design a system and know whether or not it infringes or not. And we would submit, Your Honor, it gets us right --

THE COURT: If a patent claim says analyzing the monitor data to determine if documents are interesting, made no reference to the user, just said they're interesting, would that be at least -- would you at least grant that that

is more problematic?

MR. PERLSON: I guess it is. I don't know that it's that much more because I think basically what the patent is saying is determining whether documents are interesting to the user. I mean that is what it is saying. There is really no difference between what it is saying. You are determining documents of interest to the user.

THE COURT: What if it said, analyze monitor data to determine if the documents are aesthetically pleasing?

MR. PERLSON: I think that is the Datamize example, and I would certainly submit that that is indefinite. I don't think that Datamize set out, set the floor as to what the worst possible construction could be and things could be, you know, worse than others, but I mean that's the point. To take your interesting example, I would submit that that is really no different than what is going on here.

THE COURT: Do I necessarily have to reach this issue in the context of claim construction?

MR. PERLSON: Is there a case that I can point you to that says you absolutely must do it right now? I don't know that I can cite you a case that says you absolutely must need to do it right now. I can certainly cite you a case, and we did in our brief, that says that

it's absolutely appropriate to do it right now.

THE COURT: And why should I do it now?

MR. PERLSON: Well, because we're here, we made the arguments, and it's been fully submitted; and, you know, we should get some closure to determine what it is that, you know, we're going to have this claim going forward.

And, in fact, I think -- can you pull up 26?

THE COURT: And let me tell you where we are. I think you have 15 minutes left altogether and plaintiffs have reserved 14 minutes.

MR. PERLSON: Okay.

No, that's not it. Okay. Well, let me go real quick then to the order of steps.

Can you go to the first slide?

So it's not really clear what plaintiff -- we laid these out in the briefs, and I don't need to go through this all again. It's in slide 102.

And what this does, it walks through each of the claims -- I mean each of the elements of claim 1, and the next slide does the same thing for one of the claims of the '276 patent. And it talks about how you are using what is referred to in the prior claim and the next claim.

So, for example, you are estimating a probability of (e) and you are using that in (f).

You are transparently monitoring in (a) and you

are using those transparently monitored in (b).

You are estimating parameters in (c) and you are using those parameters in (e).

I mean the whole claim has, there is an order to it. And I really haven't heard in briefs or here today why that isn't the case. And, you know, the E-Pass case -- this is 105, slide 105 -- says when most of the steps of the method claim refer to the completed results of the prior step, they have to be performed in order.

And I really don't think there can be any legitimate dispute that is the case here. The plaintiff, they seem to be making some argument about a cycle in that we're somehow creating some sort of noninfringement argument or something.

But, you know, it's not our construction that requires that each step occur for each iteration of a proposed cycle. This is a method claim. So every one of these claims, (a) through (g), needs to be performed. Of course. That is, our construction is not providing that.

Now, if you do 1(a), (b), (c), (d) and (e) and then you do (d) 100 times and then you do (e), (f), (g), we're not saying that you are somehow out. You are practicing all of the elements. And to the extent that that is what their concern is, that is not what we're saying, and I can't imagine how that can possibly be, our construction could be

interpreted in that way, and this notion of claims being performed in order and constructions being done for that is quite common.

And, really, I think the antecedent basis is really somewhat of the same issue. Here, we have a user. There is "the" user and there is an "a" user and every single one of these is the same; and it doesn't make any sense, you know, if it's not as we construe it.

There is user-specific data files, and then you talk about what you do with the user-specific data files. There is a learning machine, and you talk about what you do with the learning machine. It has to be the same learning machine. And if it is not -- and this is slide 109 -- then there is not antecedent basis.

Again, this is something it really doesn't seem like something we should be fighting over. The plaintiff says the claim is clear on its face. I'm not sure clear as to what. They never told us. In fact, as to all of these terms listed on 109, they never suggested a meaning contrary to what we've said.

So at least as to these terms, there can't be a legitimate dispute. And we would submit under O2Micro, that this is a dispute that should be resolved so that plaintiff -- and I don't know what they're going to do with it, but so they can't come in later and come up with something that

is inconsistent with this under what they view as their yet-unstated clear interpretation.

Now, they do address two terms in their arguments. They talk about the probability but, curiously -- and this is at slide 111 -- they actually admit that the estimated probability of step f refers back to the estimated probability of P(u/d) of step e. But I mean that is what our construction is.

Instead, they come up with some argument about how there is, there are multiple probabilities, one for each unseen document. But, again, this is not inconsistent with what we were saying. Yes. There is one probability for each unseen document. When we're talking about the probability, we're talking about the same probability. That is what the claim says.

And document d, the document must refer to the same document. You know, here, the response is the unseen document d introduced in step e represents a subset of document d.

Now, they said I don't know what that means. We said in our brief we don't know what that means. They never told you what that means, and we would submit that doesn't make any sense at all for unseen document d to be a subset of document d. There is nothing in the spec that would suggest that such a peculiar reading, and there is nothing

in the plain reading of the claims that would suggest that.

In fact, it wouldn't even make -- it wouldn't make any sense at all if it was. First of all, why use document d for both? And if you remember, your Honor, it was, the claims actually previously said a document d and then they put in the unseen document d, and I think to the extent that there is kind of two a documents or a unseen document in the claim, it's really by virtue of the fact that somebody messed up when they were amending it and they didn't conform it.

But clearly under their construction, if the document is not the same, then the document in step 1(d) is the same at the document in step 1(e).

And then there are all sorts of other documents in the dependent claims, and we listed them on slide 114. So which document are those? We would submit that that would be clear.

And, Your Honor, we'll rest on our papers with presenting and save some additional time for rebuttal.

THE COURT: Before you sit, going back to order of steps real quick, you mean your construction to allow for repetition of any particular step in a single cycle as I understand it but you wouldn't allow for one to go back, to go backwards. They have to go in the fixed order in which the steps are listed.

MR. PERLSON: I think that is right. Maybe if I could show you here.

THE COURT: Yes.

MR. PERLSON: Claim 1(a), let's say, in the '276. You know, you could do (a) and you could do (b) and for some reason you want to do (b) five times, okay? And then you do (c) and (d), (e), (f), and then (g) and use (g) five times. That's fine. And I don't think our claim precludes that, but you can't do (g) before you do (a) and you can't do (e) before you do (b). I mean it just doesn't make any sense. That is really all we're trying to get at.

THE COURT: You can't do any later in the alphabet letter in the step before you do the earlier ones.

MR. PERLSON: Right, in order. And, you know, again, it's a method claim so you would have to point to something somebody is doing. So, you know, there may be, the method may be performed many times, I suppose, but when we're talking about the instance of a particular method and when it's being performed, it has to be performed in the order.

THE COURT: Okay. Thank you.

All right. I think that leaves you about eight minutes.

I'll hear from the plaintiff. As I said, you have up to 14 minutes.

MR. NELSON: Can we have a short break before rebuttal?

THE COURT: That's fine. We'll take a 10-minute break.

MR. NELSON: Appreciate it. Thank you.

(Brief recess taken.)

THE COURT: We'll hear plaintiff's 14 minutes, or up to 14 minutes.

MR. NELSON: Thank you, your Honor. I apologize. I'll probably use all of it.

THE COURT: That's fine.

MR. NELSON: Can I have slide 55, please.

And so defendant started his presentation by talking about the present invention language, so that is where I will start the rebuttal, and they cited the case that they cited in the supplemental authority. And that case is nothing new. It's basically building on what the law was. What the law was in this area is that you look at the specification in its entirety and determine whether the present invention language is limiting or not.

And this is, 56 is the detailed description of the patent where it says, anyone of ordinary skill in the art would appreciate that many variations and alterations of the following details are within the scope of the invention. Accordingly, the preferred embodiment of the invention is

set forth.

The present invention referred to as Personal Web.

When you read the whole spec, it's clear the Personal Web is an embodiment here.

Another example is slide 57. While a specific embodiment of the learning machine is discussed below, it is to be understood any model that is a learning machine is within the scope of the present invention.

The present invention consists of. And then it goes again. It's another embodiment, your Honor.

And so when the patent is talking about this Personal Web embodiment that they basically start their argument with, it is just that, it's an embodiment, and the law is clear that you are not supposed to read limitations from the embodiment even if it's only a single embodiment into the claim language.

THE COURT: That wasn't the same true in Akamai, though? If it was a preferred embodiment that the discussions occurred under the sections of the patent referring to the preferred embodiment?

MR. NELSON: Yes, your Honor. That language was certainly in Akamai, but I think the difference is in Akamai, when they looked at the entirety of the specification, they concluded in this case it should be

limiting.

Here, I think when you look at the entirety of the specification in this case, it's clear that it's outside of the Akamai situation.

THE COURT: When I look to the entirety of the specification here, will I find any other model or even another preferred embodiment described other than the one that you have just highlighted?

MR. NELSON: Yes. Your Honor, you will find several other models or preferred embodiments or more preferred embodiments of different pieces of this. The figure 2 of the patent describes essentially what is in the '040, claim 1.

Other examples are figure 19 which generally describes what is in claim 1 of '276. The patent talks about initialization and gives several ways that is done. It talks about updating and analyzing. I believe it gives multiple sort of pieces of that.

So I'm not sure that you could call the figure 2 thing Personal Web the only embodiment. And there certainly is a lot of teaching about what the user model is and how it's initialized and stuff in the Personal Web embodiment.

And that sort of takes me to my second point here is the difference again between the specific versus unique language. And counsel had a slide up there. I

believe it was 16. I'm not quite sure.

That doesn't work.

So where they had a circle and they had user model, and then a single model essentially that was our construction, and then their construction was one person referring to each model.

And what defendant's counsel sort of ignored about all of that is the specific to the user language. And this is all about the term parameters in PUM's view, and although the defendant tried to make it seem like there wasn't a big difference, in PUM's view, there is a huge difference.

Defendant equates parameters and variables when they talked about figure 4, but the result of defendant's construction is if parameters are the actual, the words and things like that, each user would have a separate model made up of hundreds of thousands of words and all these other things. That is not what our view is that the claims contemplate. The claims contemplate that certainly that could happen, but you could also have a model where you take the function that I had up with the funnel slide, where you track, you track six things.

That could be a model that is specific to one user. It could also be a model that is specific to a hundred users or a thousand users because the specificness

or the specificity -- I'm not sure if specificness is a word -- but that comes from the parameters that define it, and the claims don't talk about the generic model. They talk about the model that is specific to the user and the learning machine that is specific to the user, and that language contemplates that you could have -- let's say you have a hundred different variables. Each of those variables are given a value. That value is their parameter. Those values are different for each person. Therefore, the model is specific to that person.

That is really the heart of the dispute. And it's all about the parameters term.

THE COURT: But if those numbers, the parameters were coincidently the same for two people, in your view, is the model still specific to the user?

MR. NELSON: Yes, absolutely. The model is still specific to the user because it's defined by the user. And the user-specific learning machine is specific to the user.

THE COURT: And I heard Mr. Perlson agree with that and also agree they're not trying to preclude you from having the same variables. You know, we all like sports, we all like cars. They're not trying to require you to have different variables for each user. So I'm left wondering where the dispute is here.

MR. NELSON: Well, I don't think that counsel agrees with that statement. Counsel views the parameters as the variables and the specificness is a group of variables -- How much are you interested in sports? Do you like cars? -- all of those things as the parameters, and that is what makes it specific.

And under that interpretation, you would have a model that has variable 1 to 100 for one user, variable 1 through 200 for the next one, variable 1,000 through 1,050 for the next one. That would all be different.

In our view, that is a different situation where you had a situation where you had a model that had 100 generic (a) (b) plus (a) (b) (c) (d) (e) times (x). That is a function. That is a template for a function. Learning machine.

When that model is made specific to a user by being instantiated with the user's parameters that is tracked in the user specific -- comes from the user-specific data files -- there we go -- and is tracked by the system. That, I think that is the difference. I don't think they would agree that a model that was a single model that had differing parameters being variables for different people necessarily would or would not be within the claims.

THE COURT: You agree that probability has to be a number; correct?

MR. NELSON: Yes. That takes me to another point here. And I want to mention some inventor testimony as well here because they're only citing portions of it, and I will give you a copy of all of the rebuttal slides which have sort of counter cites to inventor testimony to what they put up. I don't think that it's necessarily that relevant but I want to give a complete picture.

But back to probability.

THE COURT: Okay.

MR. NELSON: So we do agree it's about math. They're reading something into our definition of approximating likelihood or belief. They're reading something in there that we didn't intend to be there. We certainly agree that probability is about half.

The difference between that definition is that Google is trying to limit probability to a very specific type of map, and that is a percentage chance calculation, whereas probability in the Bayesian sense isn't limited to a particular type of map. It could be a percentage chance. It normally is not. It normally is expressed as some sort of a numerical value that basically reflects a degree of belief of likelihood.

I mean we could, to deal with their issue about, that ours isn't about math at all, we could talk about, you know, numerically approximating a degree of belief or

likelihood, something to that effect might work.

The dispute here isn't that we don't think it's about math and they do, it's that they try to limit it to a specific type of math.

Can I get slide 223?

And this is what Mr. Konig said.

"Question: When you say probabilities, what do you mean?

"Answer: Again, it's an estimate of degree of interest of a phenomenon you don't have absolute knowledge of."

"Estimating degrees that something will happen."

Next slide.

And then posterior probability, he uses sort of the same language here. And this is 223 and 224.

Let's go to user real quick. Can I get Konig slide 13? I'm sorry. Konig slide 213.

Now, counsel said that Mr. Konig said a user is a human being. Well, this is what Mr. Konig actually said.

"Question: And when you say 'for a specific user,' what does that mean?

"Answer: User in the sense of there is a human being operating a machine, and there's represented to the website or the Internet by some sort of electronic identifier or tag.

"Question: So the user is a human being in your sentence?

"Answer: Again, my whole sentence was a user is a human being operating a computer and is identified in our current electronic world by a tag of identifiers to a computer."

Slide 84, please. 84.

And you asked counsel about if there is any information in the specification about whether a user was a representative or not. Well, this is one example that we put up. There is also -- and I'll just give you some figure numbers. Figure 6A of the patent has, the user in that context, the name Bob being represented in there. Figure 14 is a buffer that was shown before that is associated with the user. It doesn't actually have the moniker there but it's clear from the text that it's associated with a user, again, being some electronic representation of the person.

Let's go to slide 71.

This is one of the definitions. One of the things that they cited about our definitions was this language from the prosecution history. That our definitions aren't consistent with that. On slide 72 here, it puts up the respective parties definitions in light of the prosecution history. And our definitions do follow what the statements are in the prosecution history. That there

are three limitations and the deterministic relationship.

Let's go to slide 204, please.

And so there has been a lot of talk about what the user model was here, and that it had to be specific to a user. Mr. Konig was asked a whole variety of hypotheticals about what if you had two users typing every other word on a computer or something like that, and it didn't go away? And they didn't step away from the computer. Is that one user or two? Or if you have -- I think another one was where they had six people and there are three computers and two of them are using each computer. Is that, would that be a user model specific to the user or not?

And that context, it goes back a little bit to the dispute as to what a user is as well. But in the next set of slides, 204 through 210 here, what he ultimately says is the system isn't perfect, but you can have a situation where you have a user model specific to a user based on the user being a person or representative tag or identifier where you have, the most extreme example might be two people typing every other letter of a search query or something, and if that is how that group choose to use the computer, the model that is created based on the tag or identifier using the parameters that were specific to that two-headed person typing would still be a model specific to the user.

And Mr. Konig was clear on that. The entirety

of that testimony is here in slides 209 to 210.

I think this is the conclusion.

"So it would be different than if the computer didn't know anything about them, but it will be the impact of both of their action will affect the personalization."

"So in the theoretical sense that for whatever reason, they're doing random stuff that the computer cannot differentiate, if each one of them is typing one character and going away or something, then the position would be to the position of them as a group."

Counsel made a point about the hats argument we made, and that it wasn't applicable. Well, the hats are applicable to initializing the user model, so the initializing the user model, they are the user model for that point in time. And so they definitely are applicable the argument that plaintiff is making here.

Let's go -- I don't remember the slide but the defendant had a slide up that said "program," and then it was their software implementation argument, and it was an extrinsic evidence cite. And what that cite, what the entirety of that text says, it said learning machine/program, usually represented in software. It didn't say it had to be. It said usually represented in software.

And we're not saying that it couldn't be one, but our model and function language that comes from the

specification, and, as counsel pointed out, is used throughout the specification, is much more clear as to what a user model -- what a learning machine actually is.

Counsel gave an example also on user-specific data files in the comprising language. That I think the example was something if you had a pizza comprising pepperonis and sausages or whatever it was.

Well, that is using comprising up here in the preamble sense. That is not what the case, what the Haemonetics case that we cited teaches and that is not what the situation is here.

Taking counsel's example a little further. Suppose you had a claim that says baking a pizza comprising: forming a dough base, adding a sauce base, and adding a topping base, comprising pepperonis and mushrooms.

I think in that sense, the pepperonis and mushrooms are defined by the claims, and that is the argument we're making here, and that is where their example breaks down.

I don't know if I'm out of time yet or not.

THE COURT: You have got about two more minutes, and I'm going to have two questions for you. But I'll give you the minute and-a-half, and then I'll ask the questions.

MR. NELSON: Can I have slide 215?

And so the "files" term and whether or not

files should be electronic files. We don't dispute that electronic -- or document definition, that it needs to be electronic. What we dispute is the word files. And they made some -- I'm not sure I remember them all, where they're not trying to read out dynamic generated documents, and that is good. But they're still defining files by how they're stored, and what are Mr. Konig said, there are places that we talk about tables and other data structures that are not necessarily files.

And I think one place, which I won't be able to find in a minute here probably.

THE COURT: Well, you said they would be satisfied with a definition of document to be electronic file which can include text or any type of media. So what is the problem with that?

MR. NELSON: Well, I think still it's not clear what their definition of file actually is. They made some representations but it's still defining a document by how it's stored as opposed to what it is.

THE COURT: All right. Let me ask you on learning machine, it seemed like there was some movement towards compromise there. Did you hear any? Where do you think we are on learning machine?

MR. NELSON: I'm not actually sure, I heard so many things.

THE COURT: Well, specifically, I understood Google to be comfortable with modifying improve in their construction to attempts to improve.

MR. NELSON: Yes, and I think we would be fine with that.

THE COURT: And that may have been the only progress.

MR. NELSON: We might with the monitored -- I need to remember the exact phraseology, but it's the monitored interactions piece. I mean that was movement toward where we needed to be, but I think, as we showed on one of the slides, that it's clear that the user specific data files which are used to update the user model or to define the user model, that data is used to then obtain the parameters which define the user model.

The data doesn't only come from the monitored user interactions, so if they're willing to go further to include the world knowledge concept and the other concept which is the set of documents associated with the user, there may be may be some room for some improvement there as well.

THE COURT: I will give you one more minute, if there is anything you wish to add.

MR. NELSON: Appreciate that, your Honor.

Let me have slide 213. No, wait. Let me have

slide 227, please.

This goes to the definiteness argument, and this is what Mr. Konig ultimately says, and the systems aren't perfect but what they're trying to do is inject the subjectivity when the specification teaches to one of ordinary skill in the art how to practice this invention and what would or would not be of interest to the user.

And Mr. Konig's ultimate conclusion is the system is making a determination. And they quoted a piece of it, but it's making the best estimated -- estimated based on the design principle whether the user is interested in the document or not. He absolutely thought of the user as something else.

Of course, these systems are designed to try to take the user interest into account, but from a design perspective and somebody practicing all of the elements of the claim in this case, the spec clearly teaches one of ordinary skill in the art and provides many, many examples of objective evidence of what would or would not be of interest or not of interest document-wise to the user.

And then the last point I wanted to make was just on the order of steps issue.

You know, figure 19 shows that you can go backwards. You can, for example, initialize the user model, run a search, retrieve some documents, identify

their properties, come up with a probability, present some documents to the user, run another search. Some of this stuff is being monitored so this step is being done but you wouldn't have to update during any of this time. You wouldn't have to update the user model again. You could then run another search, retrieve some documents, and as the system normally updates, whether it's every hour, every minute, every 24 hours every month, in the middle of this process there could be an estimating parameters of user-specific learning machine done based in part on the documents of interest to the user. So it wouldn't have to go in that order.

And I think with that, your Honor, I'll close. And I appreciate it very much, your time and your patience. Thank you.

THE COURT: Thank you.

Mr. Perlson, I'll round you up to 10 minutes, if you want it.

MR. PERLSON: Okay. Thank you very much, your Honor. Appreciate it.

Well, let me first start out with -- let me switch this. (Operating Elmo.)

This is 7.

Your Honor, on rebuttal, plaintiff's counsel did address this present invention point, and the one thing he

never did rebut is there is no disclosure of a method where there is a user model that is not for each user. And that is really the point. And that is why this is the same as Akamai. In that case, there was no other -- there is no disclosure of. There was an alphanumeric string that didn't include the object's original URL. Here, it's user model and each user has to have their own user model, and there is no disclosure of anything else in the spec. And I really don't think that that is disputed.

Whether or not there might be some aspects of the Personal Web embodiment that aren't claimed is a separate issue. I mean it's not every single, every single word that the person -- or what is described as a Personal Web might not be claimed, but that is an entirely separate issue as to whether the only thing that is described in the spec is that each model -- that each user has their own model.

And I wanted to talk about that a little bit because I think it's still really critical to make clear what the distinction is between our position and their position. And it seems to me that plaintiff explicitly said that in slide 16, that one on the left is what they allow. That each user does not need to have their own user model.

And that, again, they never pointed to anything in the spec that would support that. And they just seemed

to not want to have their patent limited to that. But that is not what it says. The user model is specific to the user.

And they keep on harping on the parameters. And while, you know, I think it's probably true that by virtue of the fact of the parameters, the user model being specific to the user, that the user model would have parameters and those parameters would, you know, show the user's interest in something or a topic, but it's the user model itself that has to be specific to the user, and that is what the claims say. And that is the term at issue. Is the user model itself specific to the user? Is the learning machine specific to the user?

Now, I came up with this little drawing here to show what I think plaintiff is saying.

They had said that the user model can have a hundred users or a thousand users and that parameters from each of those users can make up the user model and it can still be specific to all of them. Your Honor, that is the group model that we have, on slide 17 we show that, and that is not a user model.

This is what they're saying a user model specific to the user is. They're saying if you have user (a) (b) and (c) and there is parameters as to each of them, and as long as you are using a parameter for (a) and a

parameter for (b) and a parameter for (c) that the user model is specific to each of them.

But that doesn't make any sense and that is not what the patent describes. The patent describes (a) gets its own user model, (b) gets its own user model and (c) gets a user model. The group user model does not become specific to the user merely because it's using data from that user, and that really is the heart of the dispute here. And we would submit that the plain language of the claims and the spec are entirely consistent and really allow for no other interpretation.

There was some discussion of probability, and plaintiff conceded that probability needs to be a number, and there is no limitation. They explain how their construction accounts for that. I mean they never explained why the examples that we provided in the slide about how the user may be interested and is probably interested, our beliefs or likelihood. Those fit within their construction, and that is not what our construction provides. We submit ours is the one that is consistent with the spec. It needs to be a number and the number is a percent of the chance, and nothing has been provided to the contrary.

They seek to rebut the pizza example. That example is not as they said, talking about the preamble of the claim. We used almost identical language to the claim

at issue. I mean the claim talks about estimating parameters of a learning machine wherein the parameters define a user model -- actually, that's the wrong one. It's (b), 1(b) updating user-specific data files wherein the user-specific data files comprise the monitored user interactions. The language that we provided was making a pizza wherein the pizza comprises pepperoni and mushrooms. I mean it is exactly the same thing, and there is nothing about the preamble, and that whole example that he came up with has nothing to do with our point. As a simple matter of grammar, it still needs to be a data file.

And I will also note your Honor, your Honor, that while plaintiff took us to task for citing Mr. Konig's testimony, he actually affirmatively cited Mr. Konig's testimony when it served his purposes, and I think he showed slide 215 just a few minutes ago. So I think that it's fair game for both of us, and it is appropriate to look at.

And, finally, I will also note that in the description of user, it's true that I had much back and forthwith Mr. Konig regarding what a user was in his deposition; and, you know, he seemed to be trying to go down plaintiff's line; but when asked the clear question, he answered and he said that a user is a person operating a computer. That is a clear question and answer that I provided and nothing in his other testimony does that.

Nothing further, your Honor.

THE COURT: One question for you. It's not really directly claim construction, but I think Mr. Nelson showed me some new slides and suggested that he wanted to submit rebuttal slides. Do you have any objection to me getting a submission after the hearing of slides and I could take your one rebuttal slide?

MR. PERLSON. Yes, I want to make sure that this -- I actually did not draw this. I had Ms. Roberts. I sketched it out and it looked nothing even remotely as nice as this.

THE COURT: Do you have the slides here?

MS. JACOBS LOUDEN: We do, your Honor.

THE COURT: I'll take a copy when Google has a chance to prepare it of your rebuttal slide as well.

MR. PERLSON: Okay. But were all those rebuttal slide used?

MS. JACOBS LOUDEN: Yes, they were up here on the screen.

MR. NELSON: I don't know if every single one was used, your Honor. There probably are a couple in there that weren't used.

THE COURT: All right.

MR. NELSON: The idea was to, since we didn't know which portions of inventor testimony would be cited,

the idea was to try to canvas all of the testimony that he gave --

THE COURT: Okay.

MR. NELSON: -- to present a balanced picture.

THE COURT: You can have a seat. I'll tell you what we're going to do.

Don't forget your slide.

MR. PERLSON: (Holding up slide while sitting down).

THE COURT: So there had been a little bit of movement back and forth, a little bit of shifting of position. So I do want to give you all a chance to take a few days to meet and confer and get back to me by the end of this week on Friday and just let me know, you know, where we are in terms of which claim terms are in dispute.

I don't have high hopes that you are going to find that you have narrowed the disputes much, but I don't think that there is a lot here for me to decide right now, and there may be slightly less on Friday if I give you a few days to meet and confer. So I want you to get back to me by letters. You can each submit one, if you wish, on Friday. Let me know at that point what remains in dispute and what are the specific constructions each side is proposing at this time.

Also give me whatever additional slides you

think I need to see based on what you presented today. I do also want to get a complete copy of Mr. Konig's deposition testimony with an index to it, so it should be the Min-U-Script form or some form in which I can look things up from an index.

And the final thing I would like from you all is put your heads together and see if you can agree on what order in which the Court should address these terms in its opinion. You all took different tacts from one another in your briefing and different approaches yet again today.

I'm not forcing you to agree, but I'd like at least to put some effort in it before I do as to whether or not you can agree on a structure in which I can meaningfully resolve these disputes and give you my explanation for it. So I'll look for whether you have one for two proposals on that in your submissions Friday.

Yes, Mr. Perlson.

MR. PERLSON: I have a question on that. There are some concepts that I think are probably similar on how to group things together. If there are sort of groups that we can put together, would that be useful, for example, like four or five terms.

THE COURT: I'm going to let you see what progress you can make and it probably goes without saying but even if you reach agreement, I may write it differently,

but I would like to see what you come up with, focusing on that so that I maximize the chance of being helpful to you.

Anything further, Mr. Nelson?

MR. NELSON: No, your Honor.

THE COURT: No. And Mr. Perlson, anything?

MR. PERLSON: Nothing further, your Honor.

THE COURT: Okay. Thank you all very much. We'll be in recess.

(Claim construction hearing ends at 1:35 p.m.)